

a) Books and Book Chapters:

1. **Chapter 6 - Therapeutic polymer gel system in neural tissue engineering**, Biomaterials for Neural Tissue Engineering, Adina Magdalena Musuc, **Bogdan Stefan Vasile**, Woodhead Publishing Series in Biomaterials, 2023, Pages 151-172, ISBN 978-0-323-90554-1, <https://doi.org/10.1016/B978-0-323-90554-1.00014-8>;
2. **Chapter - New approaches in synthesis and characterization methods of iron oxide nanoparticles, Iron Oxide Nanoparticles**, Cristina CHIRCOV, **Bogdan Stefan Vasile**, ISBN 978-1-80355-175-3, IntechOpen, 10.5772/intechopen.101784;
3. **Synthesis, Processing and Application of Micro and Nanostructured Materials**, Bogdan Stefan VASILE, ISBN 978-3-03928-967-7, MDPI Publisher (Special number Book);
4. **Chapter 9 - Inorganic micro- and nanostructured implants for tissue engineering**, Neacsu, I.A., Nicoară, A.I., Vasile, O.R., **Vasile, B.S.**, Nanobiomaterials in Hard Tissue Engineering: Applications of Nanobiomaterials, 10.1016/B978-0-323-42862-0.00009-2 (2016) (Book Chapter);
5. **Incorporation Mechanism and Functional Properties of Ce-Doped BaTiO₃ Ceramics Derived from Nanopowders Prepared by the Modified Pechini Method**, Ianculescu A.C., Berger D.C., Vasilescu C.A., Olariu M., **Vasile B.S.**, Curecheriu L.P., Gajovic A., Trusca R., Nanoscale Ferroelectrics and Multiferroics: Key Processing and Characterization Issues, and Nanoscale Effects, First Edition. Edited by Miguel Alguero, J Marty Gregg and Liliana Mitoseriu. 2016 John Wiley & Sons, Ltd. Published 2016 by John Wiley & Sons, Ltd. ISBN: 978-7-118-93575-0 (Book Chapter);
6. **Bi_{0.5}Na_{0.5}TiO₃ based piezoelectric ceramics**, Marin Cernea, **Vasile B.S.**, Trusca R., Andronescu E., Politehnica Press, Bucuresti, 2014, ISBN: 978-606-515-562-6 (Book);

b) *ISI papers:*

d.1 Principal author

1. ***Hydroxyapatite-doped coatings with antimicrobial properties by matrix assisted pulsed laser evaporation***, Diana-Elena Radulescu, Bogdan Stefan Vasile, Vasile-Adrian Surdu, Roxana Doina Trusca, Alexandra Catalina Birca, Cornelia-Ioana Ilie, Lia-Mara Ditu, Ludmila Motelica, Ionela Andreea Neacsu, Iulian Boerasu, Simona Brajnicov, Cosmin Iulian Codrea, Ecaterina Andronescu, Journal of Materials Research and Technology, 38, 2025, 2534-2555, <https://doi.org/10.1016/j.jmrt.2025.08.093>
2. ***Antimicrobial chitosan-silk fibroin scaffolds with green-synthesized metal oxide nanoparticles***, Denisa-Maria Radulescu, Bodgan Stefan Vasile, Vasile-Adrian Surdu, Roxana-Doina Trusca, Cornelia-Ioana Ilie, Roxana Cristina Popescu, Ecaterina Andronescu, Veronica Drumea, Lia-Mara Ditu, Journal of Drug Delivery Science and Technology, 114, 2025, 107463, <https://doi.org/10.1016/j.jddst.2025.107463>
3. ***Silk fibroin-based scaffolds for wound healing applications with metal oxide nanoparticles***, Denisa-Maria Radulescu, Ecaterina Andronescu, Otilia Ruxandra Vasile, Anton Fica, Bodgan Stefan Vasile, Journal of Drug Delivery Science and Technology, 105689, <https://doi.org/10.1016/j.jddst.2024.105689>, WOS:001220354700001
4. ***Thermally Activated Al(OH)3 Part II—Effect of Different Thermal Treatments***, Bogdan Stefan Vasile, Gheorghe Dobra, Sorin Iliev, Lucian Cotet, Ionela Andreea Neacsu, Vasile Adrian Surdu, Adrian Ionut Nicoara, Alina Boiangiu, Laurențiu Filipescu, Ceramics 2021, 4(4), 564-575; <https://doi.org/10.3390/ceramics4040040>, WOS:000736193500001;
5. ***Thermally Activated Al (OH) 3: Part I—Morphology and Porosity Evaluation***, Bogdan Stefan Vasile, Gheorghe Dobra, Sorin Iliev, Lucian Cotet, Ionela Andreea Neacsu, Adrian Ionut Nicoara, Vasile Adrian Surdu, Alina Boiangiu, Laurențiu Filipescu, Ceramics 2021, 4(2), 265-277; <https://doi.org/10.3390/ceramics4020021>, WOS:000795373500001;
6. ***Silk fibroin-based scaffolds for wound healing applications with metal oxide nanoparticles***, Denisa-Maria Radulescu, Ecaterina Andronescu, Otilia Ruxandra Vasile, Anton Fica, Bodgan Stefan Vasile, Journal of Drug Delivery Science and Technology, 105689, <https://doi.org/10.1016/j.jddst.2024.105689>, WOS:001220354700001;
7. ***Current Status of the Open-Circuit Voltage of Kesterite CZTS Absorber Layers for Photovoltaic Applications - Part I, a Review***, Iulian Boerasu, Bogdan Stefan Vasile, Materials 2022, 15(23), 8427; <https://doi.org/10.3390/ma15238427>, WOS:000897334400001;
8. ***Fly-Ash Evaluation as Potential EOL Material Replacement of Cement in Pastes: Morpho-Structural and Physico-Chemical Properties Assessment***, Bogdan Stefan Vasile, Adrian-Ionut Nicoara, Vasile-Adrian Surdu, Vladimir Lucian Ene, Ionela Andreea Neacsu, Alexandra Elena Stoica, Ovidiu Oprea, Iulian Boierasu, Roxana Trusca, Mirijam Vrabec, Blaz Miklavic, Saso Sturm, Cleva Ow-Yang, Mehmet Ali Gulgun, Zeynep Basaran Bundur, Materials 2022, 15, 3092. <https://doi.org/10.3390/ma15093092>, WOS:000795373500001;
9. ***Synthesis and Characterization of Photoluminescent Ce(III) and Ce(IV) Substituted Hydroxyapatite Nanomaterials by Co-Precipitation Method: Cytotoxicity and Biocompatibility Evaluation***, Andrei Viorel Paduraru, Adina Magdalena Musuc, Ovidiu Cristian Oprea, Roxana Trusca, Florin Iordache, Bogdan Stefan Vasile, Ecaterina Andronescu Nanomaterials 2021, 11(8), 1911; <https://doi.org/10.3390/nano11081911>, WOS:000689776000001;

10. *Scar-Free Healing: Current Concepts and Future Perspectives*, A. E. Stoica, A. M. Grumezescu, A. O. Hermenean, E. Andronescu, **B. S. Vasile**, *Nanomaterials*. 2020, Volume 10, Issue 11, doi:10.3390/nano10112179, WOS:000593808000001;
11. *End-of-life materials used as supplementary cementitious materials in concrete industry*, Adrian Ionut Nicoara, Alexandra Elena Stoica, Mirijam Vrabec, Nastja Rogan Šmuc, Saso Sturm, Cleva Ow-Yang, Mehmet Ali Gulgun, Zeynep Basaran Bundur, Ion Ciuca, **Bogdan Stefan Vasile**, *Materials*, 2020, Volume 13, doi:10.3390/ma13081954, WOS:000531829000158;
12. *Wound dressings coated with silver nanoparticles and essential oils for the management of wound infections*, **B.S. Vasile**, Birca, A.C., Musat, M.C., Holban, A.M., *Materials*, 2020, Volume 13, Issue 7, 10.3390/ma13071682, WOS:000529875600200;
13. *Ceramic Composite Materials Obtained by Electron-Beam Physical Vapor Deposition Used as Thermal Barriers in the Aerospace Industry*, **B.S. Vasile**, A.C. Birca, V.A. Surdu, I.A. Neacsu, A.I. Nicoară, *Nanomaterials*, 2020, Volume 10, Issue 2, Pages 370, 10.3390/nano10020370, WOS:000522456300189;
14. *Recent advances in magnetite nanoparticle functionalization for nanomedicine*, Popescu, R.C., Andronescu, E., **Vasile, B.S.**, *Nanomaterials*, 2019, Volume 9, Issue 12, 10.3390/nano9121791, WOS:000506675800146;
15. *Bi_{1-x}Eu_xFeO₃ Powders: Synthesis, Characterization, Magnetic and Photoluminescence Properties*, Vasile-Adrian Surdu, Roxana Doina Truşcă, **Bogdan Ştefan Vasile**, Ovidiu Cristian Oprea, Eugenia Tanasă, Lucian Diamandescu, Ecaterina Andronescu, Adelina Carmen Ianculescu, *Nanomaterials*, 2019, Volume 9, Issue 10, 10.3390/nano9101465, WOS:000495666800120;
16. *Photoluminescent Hydroxylapatite: Eu³⁺ Doping Effect on Biological Behaviour*, Andronescu, E., Predoi, D., Neacsu, I.A., Paduraru, A.V., Musuc, A.M., Trusca, R., Oprea, O., Tanasa, E., Vasile, O.R., Nicoara, A.I., Surdu, V.A., Iordache, F., Birca, A.C., Iconaru, S.L., **Vasile, B.S.**, *Nanomaterials*, 2019, Volume 9, Issue 9, WOS:000489101900004;
17. *Towards understanding the enhancement of antibacterial activity in manganese doped ZnO nanoparticles*, Mesaros A, **Vasile BS**, Toloman D, Pop OL, Marinca T, Unguresan M, Perhaita I, Filip M, Iordache F, *Applied Surface Science*, 2019, Volume 471, Pages 960-972, 10.3390/nano9091187, WOS:000455471100110;
18. *Luminescent Hydroxyapatite Doped with Rare Earth Elements for Biomedical Applications*, I.A. Neacsu, A.E. Stoica, **B.S. Vasile**, E. Andronescu, *Nanomaterials*, 2019, Volume 9, Issue 2, 10.3390/nano9020239, WOS:000460806700108;
19. *Study of Edge and Screw Dislocation Density in GaN/Al₂O₃ Heterostructure*, Vladimir Lucian Ene, Doru Dinescu, Iulia Zai, Nikolay Djourellov, **Bogdan Stefan Vasile**, Andreea Bianca Serban, Victor Leca, Ecaterina Andronescu, *Materials*, 2019, Volume 12, Issue 24, Pages 4205, 10.3390/ma12244205, WOS:000507308200183;
20. *Structure–grain size–synthesis route of silver nanoparticles: a correlation with the cytotoxic effect*, OTILIA-RUXANDRA Vasile, ECATERINA Andronescu, ROXANA Truşcă, EUGENIU Vasile, ALINA-MARIA Holban, Mariana-Carmen Chifiriuc, Florin Iordache, Horia Maniu, Coralia Bleotu, IONELA ANDREEA Neacşu, **BOGDAN-ŞTEFAN Vasile**, *Romanian journal of morphology and embryology*, 2019, Volume 60, Issue 2, Pages 617-628, WOS:000493322700029;
21. *Antimicrobial wound dressings as potential materials for skin tissue regeneration*, Paduraru, A., Ghitulica, C., Trusca, R., Surdu, V.A., Neacsu, I.A., Holban, A.M., Birca, A.C., Iordache,

- F., **Vasile, B.S.**, Materials, 2019, Volume 12, Issue 11, Pages 1859, 10.3390/ma12111859, WOS:000472638600133;
22. *Porous ceramic support embedded with microorganisms used in water purification*, Ghitulica C., Stefan S., Vasile O.R., Trusca R., Neacsu I.A., **Vasile B.S.**, Romanian Journal of Materials, 2019, Volume 49, Issue 1, Pages 33-41, WOS:000461413500004;
 23. *Probing the dielectric, piezoelectric and magnetic behavior of CoFe₂O₄/BNT-BT_{0.08} composite thin film fabricated by sol-gel and spin-coating methods*, Cernea M, **Vasile BS**, Surdu VA, Trusca R, Bartha C, Craciun F, Galassi C, Scientific Reports, 2018, Volume 8, Issue 1, 10.1038/s41598-018-36232-3, WOS:000453224400044;
 24. *Microstructure of 800 keV Ar ion irradiated thin ZrC films*, **Vasile, B.S.**, Craciun, D., Ionescu, P., Pantelica, D., Dorcioman, G., Craciun, V., Applied Surface Science, 2018, Volume 442, Pages 773-777, 10.1016/j.apsusc.2018.02.216, WOS:000428294500090;
 25. *Structural and physical properties of InAlAs quantum dots grown on GaAs*, **Vasile, B.S.**, Daly, A.B., Craciun, D., Alexandrou, I., Lazar, S., Lemaître, A., Maaref, M.A., Iacomì, F., Craciun, V., Physica B: Condensed Matter, 2018, Volume 535, Pages 262-267, 10.1016/j.physb.2017.07.054, WOS:000427578300051;
 26. *Mg–Zn alloys, most suitable for biomedical applications*, Birca, A.B., Neacsu, I.A., Vasile, O.R., Ciuca, I., Vasile, I.M., Fayege, M.A., **Vasile, B.S.**, Romanian journal of morphology and embryology, 2018, Volume 59, Issue 1, Pages 49–54, WOS:000438117200006;
 27. *Eu³⁺-doped ZnO nanostructures: advanced characterizations, photoluminescence and cytotoxic effect*, **Vasile, B.S.**, Vasile, O.R., Ghițulică, C.D., Ilie, F.C., Nicoară, I.F., Trușca, R., Oprea, O., Surdu, V.A., Neacsu, I.A., Romanian journal of morphology and embryology, 2017, Volume 58, Issue 3, Pages, 941–952, WOS:000419089600028;
 28. *Influence of the size and the morphology of ZnO nanoparticles on cell viability*, Vasile, O.R., Serdaru, I., Andronescu, E., Trusca, R., Surdu, V.A., Oprea, O., Ilie, A., **Vasile, B.S.**, Comptes Rendus Chimie, 2015, Volume 18, Issue 12, Pages 1335-1343, 10.1016/j.crci.2015.08.005, WOS:000368050300012;
 29. *Structural and electrical properties of NBT-BT_{0.08} ceramic prepared by the pyrosol method*, C. Ghitulica, M. Cernea, **B. S. Vasile**, E. Andronescu, O. R. Vasile, C. Dragoi, R. Trusca, Ceramics International, 2013, Volume 39, Issue 5, Pages 5925–5930, 10.1016/j.ceramint.2013.01.015, WOS:000318577600148;
 30. *Synthesis and characterization of a novel controlled release zinc oxide/gentamicin–chitosan composite with potential applications in wounds care*, **B. S. Vasile**, O. Oprea, G. Voicu, A. Fica, E. Andronescu, A. Teodorescu, A. Holban, International Journal of Pharmaceutics, 2014, Volume 463 Issue 2, 161-169, 10.1016/j.ijpharm.2013.11.035, WOS:000331188000007;
 31. *Synthesis and characterization of nanostructured zinc oxide particles synthesized by the pyrosol method*, O. R. Vasile, E. Andronescu, C. Ghitulica, **B.S. Vasile**, O. Oprea, E. Vasile, R. Trusca, J Nanopart Res, 2012, Volume 14, Issue 12, 10.1007/s11051-012-1269-7, WOS:000312894200014;
 32. *Microstructure and electrical properties of zirconia and composite nanostructured ceramics sintered by different methods*, **B.S. Vasile**, E. Andronescu, C. Ghitulica, O. R. Vasile, L. Curechiu, R. Scurtu, E. Vasile, R. Trusca, L. Pall, V. Aldica, Ceramics International, 2013, Volume 39, Issue 3, Pages 2535–2543, 10.1016/j.ceramint.2012.09.013, WOS:000316032900044;

33. *Yttria totally stabilized zirconia nanoparticles obtained through the pyrosol method*, **B. S. Vasile**, O. R. Vasile, C. Ghitulica, E. Andronescu, R. Dobranis, E. Dinu, R. Trusca, Phys. Status Solidi A, 2010, Volume 207, Issue 11, Pages 2499–2504, 10.1002/pssa.200925623, WOS:000284055700014;
34. *Structural Investigations on Yttria - Doped Zirconia Nanopowders Obtained by Sol-gel Method*, **B. S. Vasile**, C. Ghitulica, N. Popescu-Pogrion, S. Constantinescu, I. Mercioniu, R. Stan, E. Andronescu, Journal of Optoelectronics and Advanced Materials, 2007, Volume 9, Issue 12, Pages 3774 – 3780, WOS:000251768700016;
35. *Synthesis, structural and morphological characteristics, magnetic and optical properties of Co doped ZnO nanoparticles*, A. Mesaros, C. D. Ghitulica, M. Popa, R. Mereu, A. Popa, T. Petrisor Jr., M. Gabor, A. I. Cadis, **B. S. Vasile**, Ceramics International, 2014, Volume 40, Issue 2, Pages 2835–2846, 10.1016/j.ceramint.2013.10.030, WOS:000329882100039;

d.2 Coauthor

1. Defective C-doped ZnO with enhanced photocatalytic and supercapacitor performances, Maria Stefan, Dana Toloman, Ameen Uddin Ammar, Arpad Mihai Rostas, Sergiu Macavei, Amélia-Elena Bocirnea, Bogdan Stefan Vasile, Ioana Perhaita, Adriana Popa, *Ceramics International*, Volume 52, Issue 1, January 2026, Pages 960-973, <https://doi.org/10.1016/j.ceramint.2025.11.396>
2. Cellulose–Silver and Cellulose–Gold Bioactive Nanocomposites Obtained Using SCOBY Purified Membranes, Violeta Dediu, Mariana Bușilă, Claudia Ungureanu, Leontina Grigore-Gurgu, Mihaela Cotârlet, Cosmin Romanitan, Vasilica Tucureanu, Oana Brincoveanu, Bogdan Stefan Vasile, Gabriela Elena Bahrim, *ACS Applied Bio Materials*, 8, 11, 9650-9663, <https://doi.org/10.1021/acsabm.5c00395>
3. Direct High-Power Microwave Interaction with a Zinc Wire: A Novel Route to Crystalline ZnO Nanopowders Synthesis, George Mogildea, Marian Mogildea, Sorin I Zgura, Natalia Mihailescu, Doina Craciun, Valentin Craciun, Oana Brincoveanu, Alexandra Mocanu, Vasilica Tucureanu, Cosmin Romanitan, Alexandru Paraschiv, Bogdan S Vasile, Catalin-Daniel Constantinescu, *Int. J. Mol. Sci.* 2025, 26(18), 8981; <https://doi.org/10.3390/ijms26188981>
4. Orange Peel-Mediated Green Synthesis of ZnO and CuO Nanoparticles: Evaluation for Antimicrobial Activity and Biocompatibility in Tissue Engineering, Denisa-Maria Radulescu, Ionela Andreea Neacsu, Bogdan Stefan Vasile, Vasile-Adrian Surdu, Ovidiu-Cristian Oprea, Roxana-Doina Trusca, Cristina Chircov, Roxana Cristina Popescu, Cornelia-Ioana Ilie, Lia-Mara Ditu, Veronica Drumea, Ecaterina Andronescu, *Int. J. Mol. Sci.* 2025, 26(18), 8781; <https://doi.org/10.3390/ijms26188781>
5. Hemocompatible hydroxyapatite-CMC pulsed laser deposited coatings with biomineralization potential for implantable metallic surfaces, Ariana Hudiță, Valentina Grumezescu, Stefan Andrei Irimiciuc, Oana Gherasim, Sergii Chertopalov, Bianca Gălățeanu, Diana-Iuliana Stanciu, Bogdan Stefan Vasile, Alexandru Mihai Grumezescu, *Materials Today Chemistry*, Volume 48, September 2025, 103005, <https://doi.org/10.1016/j.mtchem.2025.103005>
6. Hibiscus rosa-sinensis– mediated synthesis of cobalt-zinc aluminate nanoparticles, characterization and their applications as pigments, Dana Gingasu, Bogdan Stefan Vasile, Roxana Doina Trusca, Jose Maria Calderon Moreno, Vasile-Adrian Surdu, Gabriela Marinescu, Simona Somacescu, Daniela C Culita, Constantin-Daniel Negut, Silviu Preda, Adelina-Carmen Ianculescu, *Materials Science and Engineering: B*, 319, 2025, 118367, <https://doi.org/10.1016/j.mseb.2025.118367>
7. Grain size effects in BaTi0.90Hf0.10O3 ceramics with phase coexistence: the influence of nanostructuring and of the internal stress on the functional properties, Elena Mirabela Soare, Cătălina-Andreea Stanciu, Roxana Elena Pătru, Vasile-Adrian Surdu, Leontin Pădurariu, Nadejda Horchidan, Adrian-Ionuț Nicoară, Lucian Trupină, Bogdan Ștefan Vasile, Roxana

Doina Trușcă, Liliana Mitoșeriu, Adelina-Carmen Ianculescu, Journal of Materials Research and Technology, Volume 38, September–October 2025, Pages 5389-5408, <https://doi.org/10.1016/j.jmrt.2025.08.195>

8. Microwave-Assisted Hydrothermal Synthesis of Cu/Sr-Doped Hydroxyapatite with Prospective Applications for Bone Tissue Engineering, Diana-Elena Radulescu, Bogdan Stefan Vasile, Otilia Ruxandra Vasile, Ionela Andreea Neacsu, Roxana Doina Trusca, Vasile-Adrian Surdu, Alexandra Catalina Birca, Georgiana Dolete, Cornelia-Ioana Ilie, Ecaterina Andronesu, J. Compos. Sci. 2025, 9(8), 427; <https://doi.org/10.3390/jcs9080427>
9. Characterization of the ash samples before and after thermal processing aiming phosphorus extraction and residues valorization, Georgeta Predeanu, Bruno Valentim, Luminita Georgeta Popescu, Alexandru Traian Abagiu, Lucica Anghelescu, Mihaela Niculina Bălănescu, Barbara Bialecka, Elza Bontempi, Magdalena Cempa, Marius Florin Drăgoescu, Alexandra Guedes, Özben Kutlu, Mattia Massa, Elsayed Mousa, Adrian Ionut Nicoară, Hayati Olgun, Valerica Slăvescu, Bogdan Stefan Vasile, Guozhu Ye, International Journal of Coal Geology, 307, 2025, 104808, <https://doi.org/10.1016/j.coal.2025.104808>
10. New 3D Spiral Microfluidic Platform Tested for Fe₃O₄@SA Nanoparticle Synthesis, Elena-Theodora Moldoveanu, Adelina-Gabriela Niculescu, Dana-Ionela Tudorache, Alina Moroșan, Alexandra-Cătălina Bîrcă, Bogdan-Ștefan Vasile, Ariana Hudita, Dan-Eduard Mihaiescu, Tony Hadibarata, Alexandru-Mihai Grumezescu, Molecules, 2025, 30(14), 2896; <https://doi.org/10.3390/molecules30142896>
11. NiCo₂O₄ nanoparticles for enhancing voltammetric determination of sodium diclofenac in aqueous solutions, Luoana Florentina Pascu, Sorina Negrea, Sorina Motoc, Florica Manea, Aniela Pop, Vasile-Adrian Surdu, Bogdan Stefan Vasile, Andreea Mădălina Pandeale, Adelina-Carmen Ianculescu, Raluca Dumitru, Scientific Reports volume 15, Article number: 23826 (2025), <https://doi.org/10.1038/s41598-025-07722-y>
12. Microfluidic Synthesis of Magnetic Silica Aerogels for Efficient Pesticide Removal from Water, Tudorache (Trifa) Dana-Ionela, Adelina-Gabriela Niculescu, Alexandra-Catalina Birca, Denisa Alexandra Florea, Marius Radulescu, Bogdan-Stefan Vasile, Roxana Trusca, Dan-Eduard Mihaiescu, Tony Hadibarata, Alexandru-Mihai Grumezescu, Gels, 2025, 11(6), 463; <https://doi.org/10.3390/gels11060463>
13. Microfluidic Synthesis of Magnetic Silica Aerogels for Efficient Pesticide Removal from Water, Dana-Ionela Tudorache, Adelina-Gabriela Niculescu, Alexandra-Cătălina Bîrcă, Denisa Alexandra Florea, Marius Rădulescu, Bogdan-Ștefan Vasile, Roxana Trușcă, Dan-Eduard Mihaiescu, Tony Hadibarata, Alexandru-Mihai Grumezescu, Gels, 2025, 11(6), 463; <https://doi.org/10.3390/gels11060463>
14. DMPC-Based Liposomal Vesicles for Encapsulation and Controlled Release of NMN and Matrigel in Sarcopenia Therapy, Alfred Najm, Alexandra Cătălina Bîrcă, Adelina-Gabriela Niculescu, Adina Alberts, Alexandru Mihai Grumezescu, Bianca Gălățeanu, Bogdan Ștefan

Vasile, Mircea Beuran, Bogdan Severus Gaspar, Claudiu Ștefan Turculeț, Ariana Hudiță, Int. J. Mol. Sci. 2025, 26(12), 5594; <https://doi.org/10.3390/ijms26125594>

15. Composition-dependent structural, microstructural and functional characteristics of fine-grained BaTi_{1-x}Hf_xO₃ ceramics consolidated by Spark Plasma Sintering, Elena Mirabela Soare, Cătălina-Andreea Stanciu, Roxana Elena Pătru, Vasile-Adrian Surdu, Nadejda Horchidan, Liliana Mitoșeriu, Ioana Pintilie, Bogdan Ștefan Vasile, Adrian-Ionuț Nicoară, Roxana Doina Trușcă, Adelina-Carmen Ianculescu, Journal of the European Ceramic Society, 45, 15, 2025, 117600, <https://doi.org/10.1016/j.jeurceramsoc.2025.117600>
16. Nanostructured Coatings for Spinal Fixation Screws: A Dual-Function Approach Against Biofilm Formation and Implant Failure, Tiberiu Gabriel Panaitescu, Adelina-Gabriela Niculescu, Valentina Grumezescu, Bogdan Costăchescu, Alexandra Cătălina Bîrcă, Paul Cătălin Balaure, Ovidiu Cristian Oprea, Ionela Cristina Voinea, Miruna S Stan, Alina Maria Holban, Bogdan Ștefan Vasile, Alexandru Mihai Grumezescu, Daniel Mihai Teleanu, Coatings, 2025, 15(5), 584; <https://doi.org/10.3390/coatings15050584>
17. Antimicrobial Coatings Based on Hybrid Iron Oxide Nanoparticles, Doina-Antonia Mercan, Dana-Ionela Tudorache, Adelina-Gabriela Niculescu, Laurențiu Mogoantă, George Dan Mogoșanu, Alexandra Cătălina Bîrcă, Bogdan Ștefan Vasile, Ariana Hudiță, Ionela Cristina Voinea, Miruna S Stan, Tony Hadibarata, Dan Eduard Mihaiescu, Alexandru Mihai Grumezescu, Adina Alberts, Nanomaterials, 2025, 15(9), 637; <https://doi.org/10.3390/nano15090637>
18. Bioactive Hydroxyapatite–Carboplatin–Quercetin Coatings for Enhanced Osteointegration and Antitumoral Protection in Hip Endoprostheses, Gheorghe Iosub, Dana-Ionela Tudorache, Ionuț Marinell Iova, Liviu Duta, Valentina Grumezescu, Alexandra Cătălina Bîrcă, Adelina-Gabriela Niculescu, Paul Cătălin Balaure, Ionela Cristina Voinea, Miruna S Stan, Dragoș Mihai Rădulescu, Adrian Emilian Bădilă, Bogdan Ștefan Vasile, Alexandru Mihai Grumezescu, Adrian Radu Rădulescu, Coatings, 2025, 15(4), 489; <https://doi.org/10.3390/coatings15040489>
19. The sculptural and polychrome decorations in ancient ceramic, Mădălina-Oana Mihăilă, Denisa Ficaș, Oana Damian, Bogdan Ștefan Vasile, Alexandra Cristina Burdușel, Andrei Păduraru, Ecaterina Andronescu, Romanian Journal of Materials/Revista Romana de Materiale, 55, 2, 2025
20. Dipalmitoylphosphatidylcholine Lipid Vesicles for Delivering HMB, NMN, and L-Leucine in Sarcopenia Therapy, Alfred Najm, Alexandra Cătălina Bîrcă, Adelina-Gabriela Niculescu, Adina Alberts, Alexandru Mihai Grumezescu, Bianca Gălățeanu, Bogdan Ștefan Vasile, Mircea Beuran, Bogdan Severus Gaspar, Ariana Hudiță, Molecules, 2025, 30(7), 1437; <https://doi.org/10.3390/molecules30071437>
Synthesis of the Titanium Oxides Using a New Microwave Discharge Method, Marian Mogildea, George Mogildea, Sorin I Zgura, Gabriel Chiritoi, Cristian Ionescu, Valentin Craciun, Petronela Prepelita, Natalia Mihailescu, Alexandru Paraschiv, Bogdan Ștefan

Vasile, Catalin Daniel Constantinescu, Int. J. Mol. Sci., 2025, 26(5), 2173;
<https://doi.org/10.3390/ijms26052173>

21. N-doped C/Ti/C/Al/C/Si multilayer and n-doped c plus ti/c plus al/c plus si composite thin films: synthesis and characterization, V Ciupina, R Vladoiu, GC Prodan, C Porosnicu, C Lungu, V Satulu, A Mandes, V Dinca, E Andronescu, B Vasile, V Nicolescu, S Polosan, E Matei, Romanian Reports In Physics, 77, 3, 2025
22. Electrospinning and Cross-Linking of Gelatin-Poly (2-Isopropenyl-2-Oxazoline) Nanofibers: A Route to Stable Hybrid Biomaterials, Elena Olăreț, Emilian Ghibu, Aida Șelaru, Sorina Dinescu, Bogdan Ștefan Vasile, Valentin Victor Jerca, Izabela-Cristina Stancu, Florica Adriana Jerca, 2025, Journal Macromolecular Rapid Communications, e00576
23. The sculptural and polychrome decorations in ancient ceramic, Madalina-Oana Mihaila, Denisa Ficai, Oana Damian, Bogdan Stefan Vasile, Alexandra Cristina Burdusel, Andrei Paduraru, Ecaterina Andronescu, Revista Romana De Materiale-Romanian Journal Of Materials, 55, 2, 116-123, 2025
24. Green Synthesis of Copper, Zinc, and Magnesium Oxide Nanoparticles Using Orange Peel Extract, Denisa-Maria RADULESCU, Ionela Andreea NEACSU, Bodgan Stefan VASILE, Vasile-Adrian SURDU, Ecaterina ANDRONESCU, U.P.B. Sci. Bull., Series B, Vol. 87, Iss. 3, 2025
25. Rare α -MoO₃-K₂Mo₄O₁₃ hybrid structures obtained via a single molecular precursor approach, Loredana Preda, Diana Visinescu, Elena Ionela Neacsu, Maria Marcu, Tanta Spataru, Cristian D Ene, Silviu Preda, Vasile-Adrian Surdu, Bogdan Ștefan Vasile, Roxana Doina Trușcă, Adrian-Ionuț Nicoară, Elena Mirabela Soare, Maria-Gabriela Alexandru, Adelina-Carmen Ianculescu, Dalton Transactions, 2025, 54, 30, 11588-11600;
26. The sculptural and polychrome decorations in ancient ceramic, Mădălina-Oana Mihăilă, Denisa Ficai, Oana Damian, Bogdan Ștefan Vasile, Alexandra Cristina Burdușel, Andrei Păduraru, Ecaterina Andronescu, Romanian Journal of Materials, 2025, 55, 2;
27. Nanostructured Coatings for Spinal Fixation Screws: A Dual-Function Approach Against Biofilm Formation and Implant Failure, Tiberiu Gabriel Panaitescu, Adelina-Gabriela Niculescu, Valentina Grumezescu, Bogdan Costăchescu, Alexandra Cătălina Bircă, Paul Cătălin Balaure, Ovidiu Cristian Oprea, Ionela Cristina Voinea, Miruna S Stan, Alina Maria Holban, Bogdan Ștefan Vasile, Alexandru Mihai Grumezescu, Daniel Mihai Teleanu, Coatings, 2025, 15, 5, 584;
28. Composition-dependent structural, microstructural and functional characteristics of fine-grained BaTi_{1-x}Hf_xO₃ ceramics consolidated by Spark Plasma Sintering, Elena Mirabela Soare, Cătălina-Andreea Stanciu, Roxana Elena Pătru, Vasile-Adrian Surdu, Nadejda Horchidan, Liliana Mitoșeriu, Ioana Pintilie, Bogdan Ștefan Vasile, Adrian-Ionuț Nicoară, Roxana Doina Trușcă, Adelina-Carmen Ianculescu, Journal of the European Ceramic Society, 2025, 117600;

29. DMPC-Based Liposomal Vesicles for Encapsulation and Controlled Release of NMN and Matrigel in Sarcopenia Therapy, Alfred Najm, Alexandra Cătălina Bîrcă, Adelina-Gabriela Niculescu, Adina Alberts, Alexandru Mihai Grumezescu, Bianca Gălăţeanu, Bogdan Ştefan Vasile, Mircea Beuran, Bogdan Severus Gaspar, Claudiu Ştefan Turculeţ, Ariana Hudiţă, *International Journal of Molecular Sciences*, 26, 12, 5594;
30. Microfluidic Synthesis of Magnetic Silica Aerogels for Efficient Pesticide Removal from Water, Tudorache (Trifa), Dana-Ionela, Adelina-Gabriela Niculescu, Alexandra-Catalina Birca, Denisa Alexandra Florea, Marius Radulescu, Bogdan-Stefan Vasile, Roxana Trusca, Dan-Eduard Mihaiescu, Tony Hadibarata, Alexandru-Mihai Grumezescu, 2025, *Gels*, 11, 6;
31. Characterization of the ash samples before and after thermal processing aiming phosphorus extraction and residues valorization, Georgeta Predeanu, Bruno Valentim, Luminita Georgeta Popescu, Alexandru Traian Abagiu, Lucica Anghelescu, Mihaela Niculina Bălănescu, Barbara Białecka, Elza Bontempi, Magdalena Cempa, Marius Florin Drăgoescu, Alexandra Guedes, Özben Kutlu, Mattia Massa, Elsayed Mousa, Adrian Ionut Nicoară, Hayati Olgun, Valerica Slăvescu, Bogdan Stefan Vasile, Guozhu Ye, 2025, *International Journal of Coal Geology*, 307, 104808;
32. Microwave-Assisted Hydrothermal Synthesis of Cu/Sr-Doped Hydroxyapatite with Prospective Applications for Bone Tissue Engineering, Diana-Elena Radulescu, Bogdan Stefan Vasile, Otilia Ruxandra Vasile, Ionela Andreea Neacsu, Roxana Doina Trusca, Vasile-Adrian Surdu, Alexandra Catalina Birca, Georgiana Dolet, Cornelia-Ioana Ilie, Ecaterina Andronescu, *J. Compos. Sci.* 2025, 9(8), 427; <https://doi.org/10.3390/jcs9080427>;
33. Hibiscus rosa-sinensis – mediated synthesis of cobalt-zinc aluminate nanoparticles, characterization and their applications as pigments, Dana Gingasu, Bogdan Stefan Vasile, Roxana Doina Trusca, Jose Maria Calderon Moreno, Vasile-Adrian Surdu, Gabriela Marinescu, Simona Somacescu, Daniela C. Culita, Constantin-Daniel Negut, Silviu Preda, Adelina-Carmen Ianculescu, *Materials Science and Engineering: B*, Volume 319, September 2025, 118367, <https://doi.org/10.1016/j.mseb.2025.118367>
34. Antimicrobial Coatings Based on Hybrid Iron Oxide Nanoparticles, Doina-Antonia Mercan, Dana-Ionela Tudorache (Trifa), Adelina-Gabriela Niculescu, Laurenţiu Mogoantă, George Dan Mogoşanu, Alexandra Cătălina Bîrcă, Bogdan Ştefan Vasile, Ariana Hudiţă, Ionela Cristina Voinea, Miruna S. Stan, Tony Hadibarata, Dan Eduard Mihaiescu, Alexandru Mihai Grumezescu, Adina Alberts, *Nanomaterials* 2025, 15(9), 637; <https://doi.org/10.3390/nano15090637>
35. Bioactive Hydroxyapatite–Carboplatin–Quercetin Coatings for Enhanced Osteointegration and Antitumoral Protection in Hip Endoprostheses, Gheorghe Iosub, Dana-Ionela Tudorache (Trifa), Ionuţ Marinell Iova, Liviu Duta, Valentina Grumezescu, Alexandra Cătălina Bîrcă, Adelina-Gabriela Niculescu, Paul Cătălin Balaure, Ionela Cristina Voinea, Miruna S. Stan, Dragoş Mihai Rădulescu, Adrian Emilian Bădilă, Bogdan Ştefan Vasile, Alexandru Mihai Grumezescu, Adrian Radu Rădulescu, *Coatings* 2025, 15(4), 489; <https://doi.org/10.3390/coatings15040489>

36. Dipalmitoylphosphatidylcholine Lipid Vesicles for Delivering HMB, NMN, and L-Leucine in Sarcopenia Therapy, Alfred Najm, Alexandra Cătălina Bîrcă, Adelina-Gabriela Niculescu, Adina Alberts, Alexandru Mihai Grumezescu, Bianca Gălăţeanu, Bogdan Ştefan Vasile, Mircea Beuran, Bogdan Severus Gaspar, Ariana Hudîţă, *Molecules* 2025, 30(7), 1437; <https://doi.org/10.3390/molecules30071437>
37. Synthesis of the Titanium Oxides Using a New Microwave Discharge Method, Marian Mogildea, George Mogildea, Sorin I. Zgura, Gabriel Chiritoi, Cristian Ionescu, Valentin Craciun, Petronela Prepelita, Natalia Mihailescu, Alexandru Paraschiv, Bogdan Stefan Vasile, Catalin Daniel Constantinescu, *Int. J. Mol. Sci.* 2025, 26(5), 2173; <https://doi.org/10.3390/ijms26052173>
38. Experimental Study Regarding the Synthesis of Iron Oxide Nanoparticles by Laser Pyrolysis Using Ethanol as Sensitizer; Morpho-Structural Alterations Using Thermal Treatments on the Synthesized Nanoparticles, Florian Dumitrache, Anca Criveanu, Iulia Lungu, Claudiu Fleaca, Lavinia Gavrila-Florescu, Iuliana Morjan, Ioan Stamatina, Adriana Balan, Vlad Socoliuc, Bogdan Vasile, *Coatings* 2025, 15(2), 234; <https://doi.org/10.3390/coatings15020234>
39. Chitosan-poly(lactic acid) composites: from seafood waste to advanced functional materials for 3D printing, Erika Blanzeanu, Minodora Marin, Marian Nicolae Verziu, Anca Dumitru, Bogdan Stefan Vasile, Cristina Stavarache, Derniza-Elena Cozorici, Rafael Luque, Catalin Zaharia & Ionut-Cristian Radu, *Advanced Composites and Hybrid Materials* (2025) 8:66, <https://doi.org/10.1007/s42114-024-01131-x>
40. Aspartic acid functionalized magnetic nanoparticles for enhanced internalization in tumoral cell, Ludmila Motelica, Geanina Voicu, Cristina Chircov, Adrian Vasile Surdu, Roxana Doina Trusca, Bogdan Stefan Vasile, Denisa Ficai, Ovidiu Cristian Oprea, Daciana Silvia Marta, Victor-Eduard Petcu, Maria Anghelache, Anton Ficai & Manuela Calin, *Journal of the Australian Ceramic Society*, <https://doi.org/10.1007/s41779-024-01102-x>
41. Zinc Oxide-Loaded Recycled PET Nanofibers for Applications in Healthcare and Biomedical Devices, Andreea Mihaela Grămadă (Pintilie), Alexandra-Elena Stoica (Oprea), Adelina-Gabriela Niculescu, Alexandra Cătălina Bîrcă, Bogdan Ştefan Vasile, Alina Maria Holban, Teodora Mihaiescu, Andreea Iren Şerban, Alina Ciceu, Cornel Balta, Simona Dumitru, Monica Puticiu, Florin Iordache, Anca Hermenean, Adina Alberts, Alexandru Mihai Grumezescu, Ovidiu Cristian Oprea, Simona Ardelean, *Polymers (Basel)*. 2024 Dec 28;17(1):45. doi: 10.3390/polym17010045
42. Phase tailoring of silver oxide thin films for improved antimicrobial activity, Stefan Andrei Irimiciuc, Valentina Grumezescu, Alina Maria Holban, Oana Gherasim, Sergii Chertopalov, Bogdan Stefan Vasile, Petronela Prepelita, Valentin Craciun, Jan Lancok, *J. Appl. Phys.* 136, 235301 (2024), <https://doi.org/10.1063/5.0216723>
43. High-efficient separation of photoinduced charge carriers in CoFe₂O₄-ZnO magnetic heterostructures mediated by oxygen vacancies, Adriana Popa, Dana Toloman, Maria

Stefan, Cristian Leostean, Teofil Danut Silipas, Bogdan Stefan Vasile, Ovidiu Pana, Applied Surface Science, Volume 677, 21 December 2024, 161059, <https://doi.org/10.1016/j.apsusc.2024.161059>

44. Vortex-Mixing Microfluidic Fabrication of Micafungin-Loaded Magnetite–Salicylic Acid–Silica Nanocomposite with Sustained-Release Capacity, Doina-Antonia Mercan, Adelina-Gabriela Niculescu, Alexandra Cătălina Bîrcă, Diana-Elena Cristea, Alina Moroşan, Dana-Ionela Tudorache, Bogdan Purcăreanu, Bogdan Ştefan Vasile, Dana Radu, Mihai Alexandru Grigorescu, Tony Hadibarata, Dan Eduard Mihaiescu, Alexandru Mihai Grumezescu, Materials 2024, 17(23), 5816; <https://doi.org/10.3390/ma17235816>
45. Characterization of Mixtures Based on High-Density Polyethylene and Plasticized Starch, Maria Daniela Stelescu, Ovidiu-Cristian Oprea, Doina Constantinescu, Ludmila Motelica, Anton Fica, Roxana-Doina Trusca, Maria Sonmez, Dana Florentina Gurau, Mihai Georgescu, Rodica Roxana Constantinescu, Bogdan-Stefan Vasile, Denisa Fica, Polymers 2024, 16(21), 3051; <https://doi.org/10.3390/polym16213051>
46. Ghiţa, A.-N.; Slobozeanu, A.E.; Licu, L.; Ciobota, C.F.; Sobetskii, A.; Vasile, B.S.; Miculescu, F.; Piticescu, R.R. Hydrothermal Synthesis of Zirconia Doped with Naturally Mixed Rare Earths Oxides and Their Electrochemical Properties for Possible Applications in Solid Oxide Fuel Cells. Manuf. Rev. 2024, 11, 1.
47. Constantinescu, S.; Niculescu, A.-G.; Hudîţua, A.; Grumezescu, V.; Rădulescu, D.; Birca, A.C.; Dorcioman, G.; Gherasim, O.; Holban, A.M.; Găluţeanu, B.; et al. Nanostructured Coatings Based on Graphene Oxide for the Management of Periprosthetic Infections. Int. J. Mol. Sci. 2024, 25, 2389.
48. Pîrţac, A.; Nechifor, A.C.; Tanczos, S.-K.; Oprea, O.C.; Grosu, A.R.; Matei, C.; Grosu, V.-A.; Vasile, B. Ştefan; Albu, P.C.; Nechifor, G. Emulsion Liquid Membranes Based on Os--NP/n--Decanol or n--Dodecanol Nanodispersions for p--Nitrophenol Reduction. Molecules 2024, 29, 1842.
49. Pana, O.; Petran, A.; Popa, A.; Stefan, M.; Silipas, T.D.; Leostean, C.; Vasile, B.S.; Pogacean, F.; Toloman, D. Zn_xFe_{3-x}O₄--ZnO Heterojunction Interfaced with Poly (L-DOPA) Electron Transfer Mediator Layer for Enhanced Visible Light Photocatalytic Activity. J. Alloys Compd. 2024, 986, 174168.
50. Codrea, C.I.; Lincu, D.; Atkinson, I.; Culita, D.C.; Croitoru, A.-M.; Dolet, G.; Trusca, R.; Vasile, B.S.; Stan, M.S.; Fica, D.; et al. Comparison between Two Different Synthesis Methods of Strontium-Doped Hydroxyapatite Designed for Osteoporotic Bone Restoration. Materials (Basel). 2024, 17, 1472.
51. Lupuliasa, A.I.; Baroi, A.-M.; Avramescu, S.M.; Vasile, B.S.; Prisada, R.M.; Fierascu, R.C.; Fierascu, I.; Săvulescu, D.I.; Ripszky Totan, A.; Voicu-Băluţea, B.; et al. Application of Common Culinary Herbs for the Development of Bioactive Materials. Plants 2024, 13, 997.

52. P\u015fuatru, R.E.; Stanciu, C.A.; Surdu, V.A.; Soare, E.M.; Tru\u0219c\u015fu, R.D.; Vasile, B.S.; Nicoar\u015fu, A.I.; Trupin\u015fu, L.; Pasuk, I.; Botea, M.; et al. Downscaling Grain Size toward the Nanometre Range--A Key-Factor for Tuning the Crystalline Structure, Phase Transitions, Dielectric and Ferroelectric Behaviour in Ba_{0.8}Sr_{0.2}TiO₃ Ceramics. *Prog. Solid State Chem.* 2024, 100457.
53. Petri\u0219or, G.; Motelica, L.; Tru\u0219c\u015fu, R.D.; M\u00edr\u0219, A.-L.; Vasilievici, G.; Tomescu, J.-A.; Manea, C.; Dumbrav\u015fa, A. \u0219tefania; Corbu, V.M.; Gheorghe-Barbu, I.; et al. The Antimicrobial Potency of Mesoporous Silica Nanoparticles Loaded with Melissa Officinalis Extract. *Pharmaceutics* 2024, 16, 525.
54. B\u00e2\u0219c\u015fu, A.C.; Gherasim, O.; Niculescu, A.-G.; Grumezescu, A.M.; Vasile, B. \u0219tefan; Mihaiescu, D.E.; Neac\u0219u, I.A.; Andronescu, E.; Tru\u0219c\u015fu, R.; Holban, A.M.; et al. Infection-Free and Enhanced Wound Healing Potential of Alginate Gels Incorporating Silver and Tannylated Calcium Peroxide Nanoparticles. *Int. J. Mol. Sci.* 2024, 25, 5196.
55. Lupuliasa, A.I.; Prisada, R.M.; Matei, R.I.; Avramescu, S.M.; Vasile, B. \u0219tefan; Fierascu, R.C.; Fierascu, I.; Voicu-B\u016bal\u015fa, B.; Mele\u0219canu Imre, M.; Pi\u0219uru, S.-M.; et al. Development of Biologically Active Phytosynthesized Silver Nanoparticles Using Marrubium Vulgare L. Extracts: Applications and Cytotoxicity Studies. *Nanomaterials* 2024, 14, 895.
56. Niculescu, A.-G.; Munteanu, O.M.; B\u00e2\u0219c\u015fu, A.C.; Moro\u0219an, A.; Purc\u016bureanu, B.; Vasile, B. \u0219tefan; Istrati, D.; Mihaiescu, D.E.; Hadibarata, T.; Grumezescu, A.M. New 3D Vortex Microfluidic System Tested for Magnetic Core-Shell Fe₃O₄-SA Nanoparticle Synthesis. *Nanomaterials* 2024, 14, 902.
57. Niculescu, A.-G.; Mihaiescu, B.; B\u00e2\u0219c\u015fu, A.C.; Moro\u0219an, A.; Munteanu, O.M.; Vasile, B. \u0219tefan; Hadibarata, T.; Istrati, D.; Mihaiescu, D.E.; Grumezescu, A.M. Fabrication and Advanced Imaging Characterization of Magnetic Aerogel-Based Thin Films for Water Decontamination. *Gels* 2024, 10, 394.
58. Chircov, C.; Petcu, M.-C.; Vasile, B.S.; Purc\u016bureanu, B.; Nicoar\u015fu, A.I.; Oprea, O.C.; Popescu, R.C. Irinotecan-Loaded Magnetite-Silica Core-Shell Systems for Colorectal Cancer Treatment. *Int. J. Pharm.* 2024, 661, 124420.
59. Piru\u0219c\u015fu, I.A.; Balaure, P.C.; Grumezescu, V.; Irimiciuc, S.-A.; Oprea, O.-C.; B\u00e2\u0219c\u015fu, A.C.; Vasile, B.; Holban, A.M.; Voinea, I.C.; Stan, M.S.; et al. New Fe₃O₄-Based Coatings with Enhanced Anti-Biofilm Activity for Medical Devices. *Antibiotics* 2024, 13, 631.
60. Ilie, C.-I.; Spoiala, A.; Chircov, C.; Dolete, G.; Oprea, O.-C.; Vasile, B.-S.; Crainiceanu, S.A.; Nicoara, A.-I.; Marinas, I.C.; Stan, M.S.; et al. Antioxidant, Antitumoral, Antimicrobial, and Prebiotic Activity of Magnetite Nanoparticles Loaded with Bee Pollen/Bee Bread Extracts and 5-Fluorouracil. *Antioxidants* 2024, 13, 895.

61. Doicin, I.E.; Preda, M.D.; Neacsu, I.A.; Ene, V.L.; Birca, A.C.; Vasile, B.S.; Andronesu, E. Tailoring Zinc Oxide Nanoparticles via Microwave-Assisted Hydrothermal Synthesis for Enhanced Antibacterial Properties. *Appl. Sci.* 2024, 14, 7854.
62. Stoica, A.E.; Albuleț, D.; Bîrcău, A.C.; Iordache, F.; Ficăi, A.; Grumezescu, A.M.; Vasile, B. Ștefan; Andronesu, E.; Marinescu, F.; Holban, A.M. Electrospun Nanofibrous Mesh Based on PVA, Chitosan, and Usnic Acid for Applications in Wound Healing. *Int. J. Mol. Sci.* 2023, 24, 11037.
63. Popa, A.; Toloman, D.; Stefan, M.; Leostean, C.; Silipas, T.D.; Vasile, B.S.; Pana, O. High-Efficient Separation of Photoinduced Charge Carriers in CoFe₂O₄-ZnO Magnetic Heterostructures Mediated by Oxygen Vacancies. *Appl. Surf. Sci.* 2024, 677, 161059.
64. Stelescu, M.D.; Oprea, O.-C.; Constantinescu, D.; Motelica, L.; Ficăi, A.; Trusca, R.-D.; Sonmez, M.; Gurau, D.F.; Georgescu, M.; Constantinescu, R.R.; et al. Characterization of Mixtures Based on High-Density Polyethylene and Plasticized Starch. *Polymers (Basel)*. 2024, 16, 3051.
65. Sobetkii, A.-M.M.; Sobetkii, A.; Vasile, B. Ștefan; Robert, R. Enhancing solid oxide fuel cells: the strategic role of rf sputtering and rare earth elements from natural sources in thin film fabrication. In *Proceedings of the Book of Abstracts*; 2024; p. 45.
66. POPESCU, L.G.; POPA, R.G.; ANGHELESCU, L.; CAZALBAȘU, R.; PREDEANU, G.; VASILE, B.S. New possibilities of using the ash resulting from the energy recovery of poultry litter within the circular economy concept. *Sci. Pap. Ser. E. L. Reclamation, Earth Obs. & Surv. Environ. Eng.* 2024, 13.
67. Predeanu, G.; Slăvescu, V.; Drăgoescu, M.F.; Bălănescu, N.M.; Fiti, A.; Meghea, A.; Samoila, P.; Harabagiu, V.; Ignat, M.; Manea-Saghin, A.-M. Green Synthesis of Advanced Carbon Materials Used as Precursors for Adsorbents Applied in Wastewater Treatment. *Materials (Basel)*. 2023, 16, 1036.
68. Cernea, M.; Radu, R.; Amorin, H.; Vasile, B.S.; Surdu, V.A.; Trusca, R.; Gavrila, R.; Galassi, C. Magnetoelectric Properties of CoFe₂O₄/BNT-BT_{0.08} Biphasic Nanocomposites, with 0-3 Connectivity, Prepared by Sol-Gel Method. *J. Alloys Compd.* 2023, 952, 170041.
69. Păuțu, R.-E.; Stanciu, C.A.; Soare, E.M.; Surdu, V.-A.; Trușcă, R.D.; Nicoară, A.I.; Vasile, B. Ștefan; Boni, G.; Amarande, L.; Horchidan, N.; et al. Grain Size-Driven Effect on the Functional Properties in Ba_{0.6}Sr_{0.4}TiO₃ Ceramics Consolidated by Spark Plasma Sintering. *J. Eur. Ceram. Soc.* 2023, 43, 3250–3265.
70. Predoan, L.; Ciobanu, E.M.; Petcu, G.; Preda, S.; Pandeale-Cușu, J.; Anghel, E.M.; Petrescu, S.V.; Culiță, D.C.; Băuran, A.; Surdu, V.-A.; et al. Photocatalytic Performance of Sn-Doped TiO₂ Nanopowders for Photocatalytic Degradation of Methyl Orange Dye. *Catalysts* 2023, 13, 534.

71. Bălău, A.C.; Chircov, C.; Niculescu, A.G.; Hildegard, H.; Baltă, C.; Roșu, M.; Mladin, B.; Gherasim, O.; Mihaiescu, D.E.; Vasile, B. Ștefan; et al. H₂O₂-PLA-(Alg) 2Ca Hydrogel Enriched in Matrigel® Promotes Diabetic Wound Healing. *Pharmaceutics* 2023, 15, 857.
72. Motelica, L.; Oprea, O.-C.; Vasile, B.-S.; Ficăi, A.; Ficăi, D.; Andronescu, E.; Holban, A.M. Antibacterial Activity of Solvothermal Obtained Zn Nanoparticles with Different Morphology and Photocatalytic Activity against a Dye Mixture: Methylene Blue, Rhodamine b and Methyl Orange. *Int. J. Mol. Sci.* 2023, 24, 5677.
73. Predoan, L.; Petcu, G.; Preda, S.; Pandele-Cușu, J.; Petrescu, S.V.; Băușan, A.; Apostol, N.G.; Costescu, R.M.; Surdu, V.-A.; Vasile, B. Ștefan; et al. Copper-/Zinc-Doped TiO₂ Nanopowders Synthesized by Microwave-Assisted Sol–Gel Method. *Gels* 2023, 9, 267.
74. Musuc, A.M.; Vasile, B.S. Therapeutic Polymer Gel System in Neural Tissue Engineering. In *Biomaterials for Neural Tissue Engineering*; Woodhead Publishing, 2023; pp. 151–172.
75. Panaitescu, D.M.; Frone, A.N.; Nicolae, C.-A.; Gabor, A.R.; Miu, D.M.; Soare, M.-G.; Vasile, B.S.; Lupescu, I. Poly (3-Hydroxybutyrate) Nanocomposites Modified with Even and Odd Chain Length Polyhydroxyalkanoates. *Int. J. Biol. Macromol.* 2023, 244, 125324.
76. Bălău, A.C.; Gherasim, O.; Ficăi, A.; Grumezescu, A.M.; Oprea, O.-C.; Vasile, B. Ștefan; Balta, C.; Andronescu, E.; Hermenean, A.O. Electrospun Fibrous Silica for Bone Tissue Engineering Applications. *Pharmaceutics* 2023, 15, 1728.
77. Kisała, J.; Vasile, B.S.; Ficăi, A.; Ficăi, D.; Wojnarowska-Nowak, R.; Szreder, T. Reductive Photodegradation of 4, 4'-Isopropylidenebis (2, 6-Dibromophenol) on Fe₃O₄ Surface. *Materials (Basel)*. 2023, 16, 4380.
78. Gogianu, L.; Popescu, M.C.; Vasile, B.S.; Mihalache, I.; Anghel, E.M.; Damian, C.M.; Salceanu, A.; Boldeiu, A.; Constantin, E.; Radoi, A.; et al. Microarray Biochip Fabricated on Silicon Nanowires/Carbon Dots Heterostructures for Enhanced Viral DNA Detection. *Appl. Surf. Sci.* 2023, 636, 157878.
79. Alexandru, M.-G.; Ianculescu, A.-C.; Carp, O.; Culita, D.C.; Preda, S.; Ene, C.D.; Vasile, B.S.; Surdu, V.-A.; Nicoara, A.-I.; Neatu, F.; et al. Deciphering the Role of Water and a Zinc-Doping Process in a Polyol-Based Approach for Obtaining Zn/Co/Al-Based Spinels: Toward “Green” Mesoporous Inorganic Pigments. *Dalt. Trans.* 2023, 52, 10386–10401.
80. Bălău, A.C.; Gherasim, O.; Niculescu, A.-G.; Grumezescu, A.M.; Neacșu, I.A.; Chircov, C.; Vasile, B. Ștefan; Oprea, O.C.; Andronescu, E.; Stan, M.S.; et al. A Microfluidic Approach for Synthesis of Silver Nanoparticles as a Potential Antimicrobial Agent in Alginate–Hyaluronic Acid-Based Wound Dressings. *Int. J. Mol. Sci.* 2023, 24, 11466.
81. Nicoara, A.I.; Voineagu, T.G.; Alecu, A.E.; Vasile, B.S.; Maior, I.; Cojocaru, A.; Trusca, R.; Popescu, R.C. Fabrication and Characterisation of Calcium Sulphate Hemihydrate Enhanced with Zn-or B-Doped Hydroxyapatite Nanoparticles for Hard Tissue Restoration. *Nanomaterials* 2023, 13, 2219.

82. Todan, L.; Predoan\ua, L.; Petcu, G.; Preda, S.; Culiț\ua, D.C.; B\uaran, A.; Trușc\ua, R.-D.; Surdu, V.-A.; Vasile, B. Ștefan; Ianculescu, A.-C. Comparative Study of MgO Nanopowders Prepared by Different Chemical Methods. *Gels* 2023, 9, 624.
83. Stoica, A.E.; B\^irc\ua, A.C.; Mihaiescu, D.E.; Grumezescu, A.M.; Fikai, A.; Herman, H.; Cornel, B.; Roșu, M.; Gharbia, S.; Holban, A.M.; et al. Biocompatibility and Antimicrobial Profile of Acid Usnic-Loaded Electrospun Recycled Polyethylene Terephthalate (PET)—Magnetite Nanofibers. *Polymers (Basel)*. 2023, 15, 3282.
84. Nicoara, A.I.; Alecu, A.E.; Balaceanu, G.-C.; Puscasu, E.M.; Vasile, B.S.; Trusca, R. Fabrication and Characterization of Porous Diopside/Akermanite Ceramics with Prospective Tissue Engineering Applications. *Materials (Basel)*. 2023, 16, 5548.
85. Oprea, A.E.S.; B\^irc\ua, A.C.; Mihaiescu, D.E.; Grumezescu, A.M.; Fikai, A.; Herman, H.; Cornel, B.; Roșu, M.; Gharbia, S.; Holban, A.M.; et al. Biocompatibility and Antimicrobial Profile of Acid Usnic-Loaded Electrospun Recycled Polyethylene Terephthalate (PET)-Magnetite Nanofibers. *Polymers (Basel)*. 2023, 15, 3282.
86. Ion-Ebrasu, D.; Andei, R.D.; Negrila, C.C.; Boerasu, I.; Carcadea, E.; Marinoiu, A.; Vasile, B.S. CVD Growth Graphene Foam Functionalized with Platinum for Fuel Cells Applications. In *Proceedings of the Electrochemical Society Meeting Abstracts* 244; 2023; p. 2004.
87. Mesaros, A.; Garzón, A.; Nasui, M.; Bortnic, R.; Vasile, B.; Vasile, O.; Iordache, F.; Leostean, C.; Ciontea, L.; Ros, J.; et al. Insight into Synthesis and Characterisation of Ga_{0.9}Fe_{2.1}O₄ Superparamagnetic NPs for Biomedical Applications. *Sci. Rep.* 2023, 13, 18175.
88. Chircov, C.; Dumitru, I.A.; Vasile, B.S.; Oprea, O.-C.; Holban, A.M.; Popescu, R.C. Microfluidic Synthesis of Magnetite Nanoparticles for the Controlled Release of Antibiotics. *Pharmaceutics* 2023, 15, 2215.
89. Stanciu, C.; Hau, S.; Stanciu, G.; Trusca, R.; Vasile, B.S.; Tihon, C. Structural, Microstructural Characterization and Luminescence Spectroscopy of Europium-Doped Strontium Titanate Prepared by the Sol-Gel Method. *Ceram. Int.* 2023, 49, 37293–37306.
90. Ciupina, V.; Vladiu, R.; Prodan, G.C.; Porosnicu, C.; Satulu, V.; Andronescu, E.; Vasile, B.; Nicolescu, V. C/Ti/C/Al/C/Si Multilayer and C+ Ti/C+ Al/C+ Si Composite Thin Films: Synthesis and Characterization. In *Proceedings of the Nanoengineering: Fabrication, Properties, Optics, Thin Films, and Devices XX*; 2023; Vol. 12653, pp. 10–20.
91. Motelica, L.; Vasile, B.-S.; Fikai, A.; Surdu, A.-V.; Fikai, D.; Oprea, O.-C.; Andronescu, E.; Must\uațea, G.; Ungureanu, E.L.; Dobre, A.A. Antibacterial Activity of Zinc Oxide Nanoparticles Loaded with Essential Oils. *Pharmaceutics* 2023, 15, 2470.
92. Niculescu, A.-G.; Moroșan, A.; B\^irc\ua, A.C.; Gherasim, O.; Oprea, O.C.; Vasile, B. Ștefan; Purc\uareanu, B.; Mihaiescu, D.E.; R\uadulescu, M.; Grumezescu, A.M. Microwave-Assisted Silanization of Magnetite Nanoparticles Pre-Synthesized by a 3D Microfluidic Platform. *Nanomaterials* 2023, 13, 2795.

93. Mosinoiu, L.F.; Sobetkii, A.; Cursaru, L.M.; Tudor, I.A.; Matei, A.C.; Vasile, B.S.; Surdu, A.; Piticescu, R.R. STUDY ON THE CORROSION BEHAVIOUR OF MULTILAYER OXIDE COATINGS APPLIED ON STAINLESS STEEL USING THE EB-PVD METHOD IN 1N H₂SO₄ SOLUTION. In Proceedings of the 6th International Conference on Emerging Technologies in Materials Engineering EMERGEMAT; 2023; p. 95.
94. Surdu, V.-A.; Marinic\ua, M.-A.; P\uatru, R.-E.; Oprea, O.-C.; Nicoar\ua, A.I.; Vasile, B. Ștefan; Trușca, R.; Ianculescu, A.-C. High-Entropy Lead-Free Perovskite Bi_{0.2}K_{0.2}Ba_{0.2}Sr_{0.2}Ca_{0.2}TiO₃ Powders and Related Ceramics: Synthesis, Processing, and Electrical Properties. *Nanomaterials* 2023, 13, 2974.
95. Mogildea, M.; Mogildea, G.; Zgura, S.I.; Craciun, D.; Mih\uailescu, N.; Prepelita, P.; Mihai, L.; Bazavan, M.C.; Bercu, V.; Gebac, L.C.; et al. A New Method for Tungsten Oxide Nanopowder Deposition on Carbon-Fiber-Reinforced Polymer Composites for X-Ray Attenuation. *Nanomaterials* 2023, 13, 3071.
96. Constantinescu, S.; Niculescu, A.-G.; Hudit\ua, A.; Grumezescu, V.; R\uadulescu, D.; B\^irc\ua, A.C.; Irimiciuc, S.A.; Gherasim, O.; Holban, A.M.; G\ual\uațeanu, B.; et al. Silver/Graphene Oxide Nanostructured Coatings for Modulating the Microbial Susceptibility of Fixation Devices Used in Knee Surgery. *Int. J. Mol. Sci.* 2023, 25, 246.
97. Birca, A.C.; Chircov, C.; Niculescu, A.G.; Hildegard, H.; Balta, C.; Rosu, M.; Mladin, B.; Gherasim, O.; Mihaiescu, D.E.; Vasile, B.S.; et al. H₂O₂-PLA-(Alg)(2) Ca Hydrogel Enriched in Matrigel ((R)) Promotes Diabetic Wound Healing. *Pharmaceutics* 2023, 15.
98. Surdu, V.A.; Marinica, M.A.; Patru, R.E.; Oprea, O.C.; Nicoara, A.I.; Vasile, B.S. Trus, ca, R.; Ianculescu, A.-C. High-Entropy Lead-Free Perovskite Bi_{0.2}K_{0.2}Ba_{0.2}Sr_{0.2}Ca_{0.2}TiO₃ Powders and Related Ceramics: Synthesis, Processing, and Electrical Properties. *Nanomaterials* 2023, 13, 2974 2023.
99. Motelica, L.; Vasile, B.-S.; Fikai, A.; Surdu, A.-V.; Fikai, D.; Oprea, O.-C.; Andronescu, E.; Jinga, D.C.; Holban, A.M. Influence of the Alcohols on the ZnO Synthesis and Its Properties: The Photocatalytic and Antimicrobial Activities. *Pharmaceutics* 2022, 14, 2842.
100. Gheorghiu, C.C.; Ionescu, A.; Zai, M.-I.; Iancu, D.; Burducea, I.; Velisa, G.; Vasile, B.S.; Ianculescu, A.C.; Bobeica, M.; Popa, D. Nanoscale Control of Structure and Composition for Nanocrystalline Fe Thin Films Grown by Oblique Angle RF Sputtering. *Materials* (Basel). 2022, 15, 6134.
101. Ghitman, J.; Pircalabioru, G.G.; Zainea, A.; Marutescu, L.; Iovu, H.; Vasile, E.; Stavarache, C.; Vasile, B.S.; Stan, R. Macrophage-Targeted Mannose-Decorated PLGA-Vegetable Oil Hybrid Nanoparticles Loaded with Anti-Inflammatory Agents. *Colloids Surfaces B Biointerfaces* 2022, 213, doi:10.1016/j.colsurfb.2022.112423.
102. Caciandone, M.; Niculescu, A.-G.; Grumezescu, V.; Bîrcă, A.C.; Ghica, I.C.; Vasile, B. Ștefan; Oprea, O.; Nica, I.C.; Stan, M.S.; Holban, A.M. Magnetite Nanoparticles

Functionalized with Therapeutic Agents for Enhanced ENT Antimicrobial Properties. *Antibiotics* 2022, 11, 623.

103. Chircov, C.; Vasile, B.S. New Approaches in Synthesis and Characterization Methods of Iron Oxide Nanoparticles. 2022.
104. Damian-Buda, A.I.; Voicu, G.; Vasile, B.S.; Banciu, A.; Iordache, F.; Ciocan, L.T. Development of Mesoporous Borosilicate Bioactive Glass Nanoparticles Containing Mg^{2+} and Zn^{2+} : Biocompatibility, Bioactivity and Antibacterial Activity. *J. Non. Cryst. Solids* 2022, 594, 121819.
105. Curti, F.; Serafim, A.; Olaret, E.; Dinescu, S.; Samoila, I.; Vasile, B.S.; Iovu, H.; Lungu, A.; Stancu, I.C.; Marinescu, R. Development of Biocomposite Alginate-Cuttlebone-Gelatin 3D Printing Inks Designed for Scaffolds with Bone Regeneration Potential. *Mar. Drugs* 2022, 20, 670.
106. Florea, D.A.; Grumezescu, V.; Bîrcă, A.C.; Vasile, B. Ștefan; Iosif, A.; Chircov, C.; Stan, M.S.; Grumezescu, A.M.; Andronescu, E.; Chifiriuc, M.C. Bioactive Hydroxyapatite-Magnesium Phosphate Coatings Deposited by MAPLE for Preventing Infection and Promoting Orthopedic Implants Osteointegration. *Materials (Basel)*. 2022, 15, 7337.
107. Dolete, G.; Purcăreanu, B.; Mihaiescu, D.E.; Ficai, D.; Oprea, O.-C.; Bîrcă, A.C.; Chircov, C.; Vasile, B. Ștefan; Vasilievici, G.; Ficai, A. A Comparative Loading and Release Study of Vancomycin from a Green Mesoporous Silica. *Molecules* 2022, 27, 5589.
108. Nechifor, A.C.; Goran, A.; Tanczos, S.-K.; Păncescu, F.M.; Oprea, O.-C.; Grosu, A.R.; Matei, C.; Grosu, V.-A.; Vasile, B. Ștefan; Albu, P.C. Obtaining and Characterizing the Osmium Nanoparticles/n-Decanol Bulk Membrane Used for the p-Nitrophenol Reduction and Separation System. *Membranes (Basel)*. 2022, 12, 1024.
109. Petrisor, G.; Ficai, D.; Motelica, L.; Trusca, R.D.; Bîrcă, A.C.; Vasile, B.S.; Voicu, G.; Oprea, O.C.; Semenescu, A.; Ficai, A.; et al. Mesoporous Silica Materials Loaded with Gallic Acid with Antimicrobial Potential. *Nanomaterials* 2022, 12, doi:10.3390/nano12101648.
110. Marinescu, L.; Ficai, D.; Ficai, A.; Oprea, O.; Nicoara, A.I.; Vasile, B.S.; Boanta, L.; Marin, A.; Andronescu, E.; Holban, A.-M. Comparative Antimicrobial Activity of Silver Nanoparticles Obtained by Wet Chemical Reduction and Solvothermal Methods. *Int. J. Mol. Sci.* 2022, 23, 5982.
111. Popescu, R.C.; Vasile, B.Ș.; Savu, D.I.; Mogoșanu, G.D.; Bejenaru, L.E.; Andronescu, E.; Grumezescu, A.M.; Mogoantă, L. Influence of Polymer Shell Molecular Weight on Functionalized Iron Oxide Nanoparticles Morphology and In Vivo Biodistribution. *Pharmaceutics* 2022, 14, 1877.
112. Chircov, C.; Bîrcă, A.C.; Vasile, B.S.; Oprea, O.-C.; Huang, K.-S.; Grumezescu, A.M. Microfluidic Synthesis Of-Nh₂-and-CooH-Functionalized Magnetite Nanoparticles. *Nanomaterials* 2022, 12, 3160.

113. Craciun, D.; Garoi, P.; Mogildea, M.; Mogildea, G.; Zgura, S.I.; Vasile, B.S.; Craciun, V. Crystalline In₂O₃ Nanoparticles Synthesis Using Microwaves Vaporization of Metallic Wires. *Appl. Surf. Sci.* 2022, 575, 151788.
114. Chircov, C.; Ștefan, R.-E.; Dolete, G.; Andrei, A.; Holban, A.M.; Oprea, O.-C.; Vasile, B.S.; Neacșu, I.A.; Tihăuan, B. Dextran-Coated Iron Oxide Nanoparticles Loaded with Curcumin for Antimicrobial Therapies. *Pharmaceutics* 2022, 14, 1057.
115. Grumezescu, V.; Grumezescu, A.M.; Ficai, A.; Negut, I.; Vasile, B. Ștefan; Gălățeanu, B.; Hudiță, A. Composite Coatings for Osteoblast Growth Attachment Fabricated by Matrix-Assisted Pulsed Laser Evaporation. *Polymers (Basel)*. 2022, 14, 2934.
116. Mihaiescu, D.E.; Istrati, D.; Moroșan, A.; Stanca, M.; Purcăreanu, B.; Cristescu, R.; Vasile, B. Ștefan; Trușca, R.D. Low Release Study of Cefotaxime by Functionalized Mesoporous Silica Nanomaterials. *Gels* 2022, 8, 711.
117. Florea, D.A.; Grumezescu, V.; Bîrcă, A.C.; Vasile, B. Ștefan; Mușat, M.; Chircov, C.; Stan, M.S.; Grumezescu, A.M.; Andronescu, E.; Chifiriuc, M.C. Design, Characterization, and Antibacterial Performance of MAPLE-Deposited Coatings of Magnesium Phosphate-Containing Silver Nanoparticles in Biocompatible Concentrations. *Int. J. Mol. Sci.* 2022, 23, 7910.
118. Blagojević, B.; Četojević-Simin, D.; Djurić, S.; Lazzara, G.; Milioto, S.; Agić, D.; Vasile, B.S.; Popović, B.M. Anthocyanins and Phenolic Acids from *Prunus Spinosa* L. Encapsulation in Halloysite and Maltodextrin Based Carriers. *Appl. Clay Sci.* 2022, 222, doi:10.1016/j.clay.2022.106489.
119. Florea, D.A.; Grumezescu, V.; Bîrcă, A.C.; Vasile, B.S. Mus, At. *Int. J. Mol. Sci.* 2022, 23, 7910.
120. Hudiț, A.; Grumezescu, V.; Gherasim, O.; Grumezescu, A.M.; Dorcioman, G.; Negut, I.; Oprea, O.-C.; Vasile, B. Ștefan; Gălățeanu, B.; Curuțiu, C.; et al. MAPLE Processed Nanostructures for Antimicrobial Coatings. *Int. J. Mol. Sci.* 2022, 23, 15355.
121. Rayyif, S.M.I.; Mohammed, H.B.; Curuțiu, C.; Bîrcă, A.C.; Grumezescu, A.M.; Vasile, B. Ș.; Dițu, L.M.; Lazăr, V.; Chifiriuc, M.C.; Mihăescu, G.; et al. ZnO Nanoparticles-Modified Dressings to Inhibit Wound Pathogens. *Materials (Basel)*. 2021, 14, doi:10.3390/ma14113084.
122. Ion-Ebrașu, D.; Andrei, R.D.; Enache, S.; Căprărescu, S.; Negrilă, C.C.; Jianu, C.; Enache, A.; Boerașu, I.; Carcadea, E.; Varlam, M.; et al. Nitrogen Functionalization of Cvd Grown Three-Dimensional Graphene Foam for Hydrogen Evolution Reactions in Alkaline Media. *Materials (Basel)*. 2021, 14, doi:10.3390/ma14174952.
123. Spirescu, V.A.; Niculescu, A.-G.; Slave, Ș.; Bîrcă, A.C.; Dorcioman, G.; Grumezescu, V.; Holban, A.M.; Oprea, O.-C.; Vasile, B. Ș.; Grumezescu, A.M.; et al. Anti-Biofilm Coatings Based on Chitosan and Lysozyme Functionalized Magnetite Nanoparticles. *Antibiotics* 2021, 10, doi:10.3390/antibiotics10101269.

124. Cursaru, L.-M.; Valsan, S.N.; Puscasu, M.-E.; Tudor, I.A.; Zarnescu-Ivan, N.; Vasile, B.S.; Piticescu, R.M. Study of ZnO-Cnt Nanocomposites in High-Pressure Conditions. *Materials (Basel)*. 2021, 14, doi:10.3390/ma14185330.
125. Chircov, C.; Matei, M.-F.; Neacșu, I.A.; Vasile, B.S.; Oprea, O.-C.; Croitoru, A.-M.; Trușcă, R.-D.; Andronescu, E.; Sorescu, I.; Bărbuceanu, F. Iron Oxide–Silica Core–Shell Nanoparticles Functionalized with Essential Oils for Antimicrobial Therapies. *Antibiotics* 2021, 10, doi:10.3390/antibiotics10091138.
126. Paduraru, A. V; Oprea, O.; Musuc, A.M.; Vasile, B.S.; Iordache, F.; Andronescu, E. Influence of Terbium Ions and Their Concentration on the Photoluminescence Properties of Hydroxyapatite for Biomedical Applications. *Nanomaterials* 2021, 11, doi:10.3390/nano11092442.
127. Popescu, R.C.; Savu, D.I.; Bierbaum, M.; Grbenicek, A.; Schneider, F.; Hosser, H.; Vasile, B. Ș; Andronescu, E.; Wenz, F.; Giordano, F.A.; et al. Intracellular Delivery of Doxorubicin by Iron Oxide-Based Nano-Constructs Increases Clonogenic Inactivation of Ionizing Radiation in Hela Cells. *Int. J. Mol. Sci.* 2021, 22, doi:10.3390/ijms22136778.
128. Predeanu, G.; Slăvescu, V.; Bălănescu, M.; Dorina Mihalache, R.; Mihaly, M.; Marin, A.C.; Meghea, A.; Valentim, B.; Guedes, A.; Abagiu, A.T.; et al. Coal Bottom Ash Processing for Capitalization According to Circular Economy Concept. *Miner. Eng.* 2021, 170, doi:10.1016/j.mineng.2021.107055.
129. Chircov, C.; Bîrcă, A.C.; Grumezescu, A.M.; Vasile, B.S.; Oprea, O.; Nicoară, A.I.; Yang, C.-H.; Huang, K.-S.; Andronescu, E. Synthesis of Magnetite Nanoparticles through a Lab-on-Chip Device. *Materials (Basel)*. 2021, 14, doi:10.3390/ma14195906.
130. Motelica, L.; Ficai, D.; Oprea, O.-C.; Ficai, A.; Ene, V.-L.; Vasile, B.-S.; Andronescu, E.; Holban, A.-M. Antibacterial Biodegradable Films Based on Alginate with Silver Nanoparticles and Lemongrass Essential Oil–Innovative Packaging for Cheese. *Nanomaterials* 2021, 11, doi:10.3390/nano11092377.
131. Fiameni, L.; Assi, A.; Fahimi, A.; Valentim, B.; Moreira, K.; Predeanu, G.; Slăvescu, V.; Vasile, B.Ș.; Nicoară, A.I.; Borgese, L.; et al. Simultaneous Amorphous Silica and Phosphorus Recovery from Rice Husk Poultry Litter Ash. *RSC Adv.* 2021, 11, 8927–8939, doi:10.1039/d0ra10120f.
132. Vlad, I.M.; Nuță, D.C.; Ancuceanu, R. V; Caproiu, M.T.; Dumitrascu, F.; Marinas, I.C.; Chifiriuc, M.C.; Măruțescu, L.G.; Zarafu, I.; Papacoea, I.R.; et al. New O-Aryl-Carbamoyl-Oxymino-Fluorene Derivatives with Mi-Crobicidal and Antibiofilm Activity Enhanced by Combination with Iron Oxide Nanoparticles. *Molecules* 2021, 26, doi:10.3390/molecules26103002.
133. Cursaru, L.M.; Valsan, S.N.; Puscasu, M.E.; Tudor, I.A.; Zarnescu-Ivan, N.; Vasile, B.S.; Piticescu, R.M. Study of ZnO-CNT Nanocomposites in High-Pressure Conditions. *Materials* 2021, 14, 5330 2021.

134. Neacsu, I.A.; Leau, S.-A.; Marin, S.; Holban, A.M.; Vasile, B.-S.; Nicoara, A.-I.; Ene, V.L.; Bleotu, C.; Albu Kaya, M.G.; Ficai, A. Collagen-Carboxymethylcellulose Biocomposite Wound-Dressings with Antimicrobial Activity. *Materials (Basel)*. 2021, 14, 1–19, doi:10.3390/ma14051153.
135. Spirescu, V.A.; Chircov, C.; Grumezescu, A.M.; Vasile, B. Ș.; Andronesu, E. Inorganic Nanoparticles and Composite Films for Antimicrobial Therapies. *Int. J. Mol. Sci.* 2021, 22, doi:10.3390/ijms22094595.
136. Puiu, R.A.; Balaure, P.C.; Constantinescu, E.; Grumezescu, A.M.; Andronesu, E.; Oprea, O.-C.; Vasile, B.S.; Grumezescu, V.; Negut, I.; Nica, I.C.; et al. Anti-Cancer Nanopowders and Maple-Fabricated Thin Coatings Based on Spions Surface Modified with Paclitaxel Loaded β -Cyclodextrin. *Pharmaceutics* 2021, 13, doi:10.3390/pharmaceutics13091356.
137. Spirescu, V.A.; Șuhan, R.; Niculescu, A.-G.; Grumezescu, V.; Negut, I.; Holban, A.M.; Oprea, O.-C.; Bîrcă, A.C.; Vasile, B. Ș.; Grumezescu, A.M.; et al. Biofilm-Resistant Nanocoatings Based on ZnO Nanoparticles and Linalool. *Nanomaterials* 2021, 11, doi:10.3390/nano11102564.
138. Botea, M.; Pintilie, I.; Surdu, V.-A.; Stanciu, C.-A.; Trusca, R.-D.; Vasile, B.S.; Patru, R.; Ianculescu, A.-C.; Pintilie, L. Structural, Functional Properties and Enhanced Thermal Stability of Bulk Graded (Ba,Sr)TiO₃ structures Obtained by Spark Plasma Sintering. *J. Mater. Res. Technol.* 2021, 12, 2085–2103, doi:10.1016/j.jmrt.2021.04.011.
139. Serban, A.B.; Ene, V.L.; Dinescu, D.; Zai, I.; Djourellov, N.; Vasile, B.S.; Leca, V. Studies of Defect Structure in Epitaxial Aln/Gan Films Grown on (111) 3c-sic. *Nanomaterials* 2021, 11, doi:10.3390/nano11051299.
140. Nocivin, A.; Raducanu, D.; Vasile, B.; Trisca-rusu, C.; Cojocaru, E.M.; Dan, A.; Irimescu, R.; Cojocaru, V.D. Tailoring a Low Young Modulus for a Beta Titanium Alloy by Combining Severe Plastic Deformation with Solution Treatment. *Materials (Basel)*. 2021, 14, doi:10.3390/ma14133467.
141. Gherasim, O.; Popescu, R.C.; Grumezescu, V.; Mogoșanu, G.D.; Mogoantă, L.; Iordache, F.; Holban, A.M.; Vasile, B. Ș.; Bîrcă, A.C.; Oprea, O.-C.; et al. MAPLE Coatings Embedded with Essential Oil-conjugated Magnetite for Anti-biofilm Applications. *Materials (Basel)*. 2021, 14, doi:10.3390/ma14071612.
142. Istrati, D.; Moroșan, A.; Stan, R.; Vasile, B. Ș.; Vasilievici, G.; Oprea, O.; Dolete, G.; Purcăreanu, B.; Mihaiescu, D.E. Microwave-Assisted Sol–Gel Preparation of the Nanostructured Magnetic System for Solid-Phase Synthesis. *Nanomaterials* 2021, 11, doi:10.3390/nano11123176.
143. Gingasu, D.; Mindru, I.; Culita, D.C.; Marinescu, G.; Somacescu, S.; Ianculescu, A.; Surdu, V.-A.; Preda, S.; Oprea, O.; Vasile, B.S. Mentha Piperita-Mediated Synthesis of

Cobalt Aluminate Nanoparticles and Their Photocatalytic Activity. *J. Mater. Sci. Mater. Electron.* 2021, 32, 11220–11231, doi:10.1007/s10854-021-05791-z.

144. Ol\uare\u0219, E.; Dr\uagu\u0219in, D.-M.; Serafim, A.; Lungu, A.; \u0218elaru, A.; Dobranici, A.; Dinescu, S.; Costache, M.; Boera\u0219u, I.; Vasile, B. \u0218tefan; et al. Electrospinning Fabrication and Cytocompatibility Investigation of Nanodiamond Particles-Gelatin Fibrous Tubular Scaffolds for Nerve Regeneration. *Polymers (Basel)*. 2021, 13, 407.
145. Gherasim, O.; Grumezescu, A.M.; Mogo\u0219sanu, G.D.; Vasile, B. \u0218tefan; Bejenaru, C.; Bejenaru, L.E.; Andronescu, E.; Mogoant\u0219ua, L. Biodistribution of Essential Oil-Conjugated Silver Nanoparticles. *Rom. J. Morphol. Embryol.* 2021, 61, 1099.
146. Botea, M.; Pintilie, I.; Surdu, V.-A.; Ianculescu, A.-C.; Pintilie, L. Corrigendum to “Structural, Functional Properties and Enhanced Thermal Stability of Bulk Graded (Ba, Sr) TiO₃ Structures Obtained by Spark Plasma Sintering” [*J Mater Res Technol* Vol. 12 (2021) 2085e2103]. *J. Mater. Res. Technol.* 2021, 13, 1323.
147. Spoial\u0219ua, A.; Ilie, C.-I.; Tru\u0219c\u0219ua, R.-D.; Oprea, O.-C.; Surdu, V.-A.; Vasile, B. \u0218tefan; Ficai, A.; Ficai, D.; Andronescu, E.; Di\u0219u, L.-M. Zinc Oxide Nanoparticles for Water Purification. *Materials (Basel)*. 2021, 14, 4747.
148. Paduraru, A.V.; Oprea, O.; Musuc, A.M.; Vasile, B.S.; Ficai, A.; Andronescu, E. Photoluminescent nanomaterials based on europium doped hydroxyapatite. *Rev. Rom. Mater. J. Mater.* 2021, 51, 353–360.
149. Caciandone, M.; Niculescu, A.-G.; Ro\u0219u, A.R.; Grumezescu, V.; Negut, I.; Holban, A.M.; Oprea, O.; Vasile, B. \u0218tefan; B\u00b0\u0219c\u0219ua, A.C.; Grumezescu, A.M.; et al. Peg-Functionalized Magnetite Nanoparticles for Modulation of Microbial Biofilms on Voice Prosthesis. *Antibiotics* 2021, 11, 39.
150. Bu\u0219sil\u0219ua, M.; T\u0219uab\u0219uacaru, A.; Mu\u0219cssat, V.; Vasile, B. \u0218tefan; Nea\u0219su, I.A.; Pinheiro, T.; Roma-Rodrigues, C.; Baptista, P. V.; Fernandes, A.R.; Matos, A.P.; et al. Size-Dependent Biological Activities of Fluorescent Organosilane-Modified Zinc Oxide Nanoparticles. *J. Biomed. Nanotechnol.* 2020, 16, 137–152.
151. Oprea, O.C.; Surdu, V.A.; Vasile, B.S.; Ficai, A.; Ficai, D.; Andronescu, E. Di\u0219u, L. M. Zinc oxide nanoparticles water purification. *Mater.* 2021, 14, 4747.
152. Serban, A.B.; Ene, V.L.; Dinescu, D.; Zai, I.; Djourellov, N.; Vasile, B.S.; Leca, V. Studies of Defect Structure in Epitaxial AlN/GaN Films Grown on (111) 3C-SiC. *Nanomaterials* 2021, 11, 1299 2021.
153. Motelica, L.; Popescu, A.; R\u00e1zvan, A.-G.; Oprea, O.; Tru\u0219c\u00e1, R.-D.; Vasile, B.-S.; Dumitru, F.; Holban, A.-M. Facile Use of ZnO Nanopowders to Protect Old Manual Paper Documents. *Materials (Basel)*. 2020, 13, 1–20, doi:10.3390/ma13235452.
154. Craciun, F.; Dimitriu, E.; Vasile, B.S.; Negri\u0219la, C.C.; Trusca, R.; Birjega, R.; Cernea, M. The Enhancement Mechanism of Dielectric Properties of Pb(Zr,Ti)O₃ via

- (Mg²⁺,Sb³⁺) Incorporation for Supercapacitors. *Mater. Today Chem.* 2020, 18, doi:10.1016/j.mtchem.2020.100350.
155. Craciun, D.; Vasile, B.S.; Lambers, E.; Makino, H.; Craciun, V. Microstructural Investigations of 800 KeV Ar Ions Irradiated Nanocrystalline ZrN Thin Films. *Surf. Eng.* 2020, 36, 326–333, doi:10.1080/02670844.2019.1668677.
 156. Dumitru, R.; Negrea, S.; Ianculescu, A.; Pacurariu, C.; Vasile, B.; Surdu, A.; Manea, F. Lanthanum Ferrite Ceramic Powders: Synthesis, Characterization and Electrochemical Detection Application. *Materials (Basel)*. 2020, 13, doi:10.3390/MA13092061.
 157. Popescu, R.C.; Savu, D.; Dorobantu, I.; Vasile, B.S.; Hosser, H.; Boldeiu, A.; Temelie, M.; Straticiuc, M.; Iancu, D.A.; Andronescu, E.; et al. Efficient Uptake and Retention of Iron Oxide-Based Nanoparticles in HeLa Cells Leads to an Effective Intracellular Delivery of Doxorubicin. *Sci. Rep.* 2020, 10, doi:10.1038/s41598-020-67207-y.
 158. Gherasim, O.; Grumezescu, A.M.; Grumezescu, V.; Iordache, F.; Vasile, B.S.; Holban, A.M. Bioactive Surfaces of Polylactide and Silver Nanoparticles for the Prevention of Microbial Contamination. *Materials (Basel)*. 2020, 13, doi:10.3390/ma13030768.
 159. Manikandan, V.; Petrila, I.; Vigneselvan, S.; Mane, R.S.; Vasile, B.; Dharmavarapu, R.; Lundgaard, S.; Juodkazis, S.; Chandrasekaran, J. A Reliable Chemiresistive Sensor of Nickel-Doped Tin Oxide (Ni-SnO₂) for Sensing Carbon Dioxide Gas and Humidity. *RSC Adv.* 2020, 10, 3796–3804, doi:10.1039/c9ra09579a.
 160. Ravariu, C.; Mihaiescu, D.; Morosan, A.; Vasile, B.S.; Purcareanu, B. Sulpho-Salicylic Acid Grafted to Ferrite Nanoparticles for N-Type Organic Semiconductors. *Nanomaterials* 2020, 10, 1–10, doi:10.3390/nano10091787.
 161. Motelica, L.; Marinof, L.; Holban, A.; Vasile, B.S.; Fica, A. Optical, Photocatalytic and Antibacterial Properties of Zinc Oxide Nanoparticles Obtained by a Solvothermal Method. *UPB Sci. Bull. Ser. B Chem. Mater. Sci.* 2020, 82, 59–70.
 162. Cernea, M.; Radu, R.; Amorín, H.; Greculeasa, S.G.; Vasile, B.S.; Surdu, V.A.; Ganea, P.; Trusca, R.; Hattab, M.; Galassi, C. Lead-Free BNT–BT$\langle 0.08 \rangle$/Cofe$\langle 2 \rangle$o$\langle 4 \rangle$ Core–Shell Nanostructures with Potential Multifunctional Applications. *Nanomaterials* 2020, 10, doi:10.3390/nano10040672.
 163. Ion-Ebrasu, D.; Pollet, B.G.; Caprarescu, S.; Chitu, A.; Trusca, R.; Niculescu, V.; Gabor, R.; Carcadea, E.; Varlam, M.; Vasile, B.S. Graphene Inclusion Effect on Anion-Exchange Membranes Properties for Alkaline Water Electrolyzers. *Int. J. Hydrogen Energy* 2020, 45, 17057–17066, doi:10.1016/j.ijhydene.2020.04.195.
 164. Nicoara, A.I.; Stoica, A.E.; Ene, D.-I.; Vasile, B.S.; Holban, A.M.; Neacsu, I.A. In Situ and Ex Situ Designed Hydroxyapatite: Bacterial Cellulose Materials with Biomedical Applications. *Materials (Basel)*. 2020, 13, 1–17, doi:10.3390/ma13214793.

165. Vintila, I.S.; Iovu, H.; Alcea, A.; Cucuruz, A.; Mandoc, A.C.; Vasile, B.S. The Synthetization and Analysis of Dicyclopentadiene and Ethylidene-Norbornene Microcapsule Systems. *Polymers (Basel)*. 2020, 12, doi:10.3390/POLYM12051052.
166. Ravariu, C.; Mihaiescu, D.E.; Morosan, A.; Istrati, D.; Purcoreanu, B.; Cristescu, R.; Trusca, R.; Vasile, B.S. Solution for Green Organic Thin Film Transistors: Fe₃O₄ Nano-Core with PABA External Shell as p-Type Film. *J. Mater. Sci. Mater. Electron.* 2020, 31, 3063–3073, doi:10.1007/s10854-019-02851-3.
167. Nicoara, A.I.; Ene, V.L.; Voicu, B.B.; Bucur, M.A.; Neacsu, I.A.; Vasile, B.S.; Iordache, F. Biocompatible Ag/Fe-Enhanced TiO₂ Nanoparticles as an Effective Compound in Sunscreens. *Nanomaterials* 2020, 10, doi:10.3390/nano10030570.
168. Popescu, R.C.; Straticiuc, M.; Mustăciosu, C.; Temelie, M.; Truşcă, R.; Vasile, B. Ş; Boldeiu, A.; Mirea, D.; Andrei, R.F.; Cenuşă, C.; et al. Enhanced Internalization of Nanoparticles Following Ionizing Radiation Leads to Mitotic Catastrophe in MG-63 Human Osteosarcoma Cells. *Int. J. Mol. Sci.* 2020, 21, 1–17, doi:10.3390/ijms21197220.
169. Popescu, R.C.; Savu, D.I.; Olarescu, A.D.; Gherasim, O.; Banita, S.; Straticiuc, M.; Mirea, D.; Andrei, R.F.; Trusca, R.; Vasile, B.S.; et al. In Vitro Magnetic Targeted Delivery of Doxorubicin Using Iron Oxide Nanoparticles Leads to Enhanced Cell Death in Glioblastoma. *UPB Sci. Bull. Ser. B Chem. Mater. Sci.* 2020, 82, 73–84.
170. Ene, V.L.; Dinescu, D.; Djourellov, N.; Zai, I.; Vasile, B.S.; Serban, A.B.; Leca, V.; Andronesu, E. Defect Structure Determination of GaN Films in GaN/AlN/Si Heterostructures by HR-TEM, XRD, and Slow Positrons Experiments. *Nanomaterials* 2020, 10, doi:10.3390/nano10020197.
171. Curecheriu, L.; Harnagea, C.; Buscaglia, M.T.; Pallecchi, I.; Vasile, B.S.; Surdu, V.-A.; Ianculescu, A.-C.; Pignolet, A.; Rosei, F.; Mitoseriu, L.; et al. Four-Fold Multifunctional Properties in Self-Organized Layered Ferrite. *Ceram. Int.* 2020, 46, 28621–28630, doi:10.1016/j.ceramint.2020.08.021.
172. Alsabti, M.A.; Ciuca, I.; Vasile, B.Ş.; Abou Harb, A.; Trusca, R. The Effect of Different Surfaces Roughness of Ti6Al4V Alloy on Silver Doped Hydroxyapatite Coating. *UPB Sci. Bull. Ser. B Chem. Mater. Sci.* 2020, 82, 209–220.
173. Docea, A.O.; Calina, D.; Buga, A.M.; Zlatian, O.; Paoliello, M.M.B.; Mogosanu, G.D.; Streba, C.T.; Popescu, E.L.; Stoica, A.E.; Bîrcă, A.C.; et al. The Effect of Silver Nanoparticles on Antioxidant/pro-Oxidant Balance in a Murine Model. *Int. J. Mol. Sci.* 2020, 21, doi:10.3390/ijms21041233.
174. FICAI, A.; FICAI, D.; NEACSU, I.A.; VASILE, B.S.; TRUSCĂ, R.; ANDRONESCU, E. MULTIFUNCTIONAL MATERIALS BASED ON COLLAGEN AND. *Mater. conferinței științifice naționale cu Particip. internațională* ÎNVIȚĂMÂNT Super. TRADIȚII, VALORI, Perspect. 2020, 13.

175. Vasile, B.S. Synthesis, Processing and Application of Micro and Nanostructured Materials 2020.
176. Cristea, D.; Cunha, L.; Gabor, C.; Ghiuta, I.; Croitoru, C.; Marin, A.; Velicu, L.; Besleaga, A.; Vasile, B. Tantalum Oxynitride Thin Films: Assessment of the Photocatalytic Efficiency and Antimicrobial Capacity. *Nanomaterials* 2019, 9, doi:10.3390/nano9030476.
177. Popescu, L.; Buzatu, D.; Balasoiu, M.; Stan, C.; Vasile, B.S.; Sacarescu, L.; Creanga, D.; Ivankov, O.; Soloviov, D.; Balasoiu-Gaina, A.-M. Study on Ageing of Cobalt Ferrite Nanoparticles and Their Fate in the Environment. *Rom. J. Phys.* 2019, 64.
178. Nicoara, A.I.; Neacsu, I.A.; Ene, V.L.; Vasile, B.S.; Fikai, A.; Andronescu, E. Hydroxyapatite/Carbon Based Biocomposite Scaffolds as Prospective Materials for Bone Tissue Engineering. *UPB Sci. Bull. Ser. B Chem. Mater. Sci.* 2019, 81, 107–120.
179. Popescu, E.L.; Bălăsoiu, M.; Cristea, O.M.; Stoica, A.E.; Oprea, O.C.; Vasile, B.Ș.; Grumezescu, A.M.; Băncescu, G.; Busuioc, C.J.; Mogoșanu, G.D.; et al. Study of Antimicrobial Effects of Functionalized Silver Nanoparticles. *Rom. J. Morphol. Embryol.* 2019, 60, 939–946.
180. Dumitru, R.; Ianculescu, A.; Păcurariu, C.; Lupa, L.; Pop, A.; Vasile, B.; Surdu, A.; Manea, F. BiFeO₃-Synthesis, Characterization and Its Photocatalytic Activity towards Doxorubicin Degradation from Water. *Ceram. Int.* 2019, 45, 2789–2802, doi:10.1016/j.ceramint.2018.07.298.
181. Grumezescu, A.M.; Stoica, A.E.; Dima-Bălcescu, M.-Ș.; Chircov, C.; Gharbia, S.; Baltă, C.; Roșu, M.; Herman, H.; Holban, A.M.; Fikai, A.; et al. Electrospun Polyethylene Terephthalate Nanofibers Loaded with Silver Nanoparticles: Novel Approach in Anti-Infective Therapy. *J. Clin. Med.* 2019, 8, doi:10.3390/jcm8071039.
182. Manikandan, V.; Tudorache, F.; Petrila, I.; Mane, R.S.; Kuncser, V.; Vasile, B.; Morgan, D.; Vigneselvan, S.; Mirzaei, A. Fabrication and Characterization of Ru-Doped LiCuFe₂O₄ Nanoparticles and Their Capacitive and Resistive Humidity Sensor Applications. *J. Magn. Mater.* 2019, 474, 563–569, doi:10.1016/j.jmmm.2018.11.072.
183. Ion, I.; Senin, R.M.; Vasile, B.; Ion, A.C. Influence of the Matrix of Aqueous Solutions on the Adsorption of Endocrine Disruptors by Fullerene C₆₀. *J. Environ. Eng. Landsc. Manag.* 2019, 27, 1–11, doi:10.3846/jeelm.2019.7644.
184. Tanasa, E.; Zaharia, C.; Radu, I.-C.; Surdu, V.-A.; Vasile, B.S.; Damian, C.-M.; Andronescu, E. Novel Nanocomposites Based on Functionalized Magnetic Nanoparticles and Polyacrylamide: Preparation and Complex Characterization. *Nanomaterials* 2019, 9, doi:10.3390/nano9101384.
185. Manikandan, V.; Kuncser, V.; Vasile, B.; Kavita, S.; Vigneselvan, S.; Mane, R.S. Enhancement in Magnetic and Dielectric Properties of the Ruthenium-Doped Copper

- Ferrite($\text{Ru-CuFe}_2\text{O}_4$) Nanoparticles. *J. Magn. Magn. Mater.* 2019, 476, 18–23, doi:10.1016/j.jmmm.2018.12.050.
186. Mihai, M.D.; Ionescu, P.; Pantelica, D.; Petrascu, H.; Craciun, D.; Craciun, V.; Vasiliu, F.; Vasile, B.S.; Mercioniu, I. Annealing of Preexisting Defects in Silicon Single Crystals by Ion Irradiation. *Nucl. Instruments Methods Phys. Res. Sect. B Beam Interact. with Mater. Atoms* 2019, 450, 85–89, doi:10.1016/j.nimb.2018.09.005.
 187. Jinga, S.-I.; Skokin, M.; Vasile, B.-S.; Constantinoiu, I.; Miu, D.; Bacalum, M.; Busuioc, C. Development of Vitroceramic Coatings and Analysis of Their Suitability for Biomedical Applications. *Coatings* 2019, 9, doi:10.3390/coatings9100671.
 188. Mocioiu, A.M.; Tutuianu, R.; Cursaru, L.M.; Piticescu, R.M.; Stanciu, P.; Vasile, B.S.; Trusca, R.; Sereanu, V.; Meghea, A. 3D Structures of Hydroxyapatite Obtained from Rapana Venosa Shells Using Hydrothermal Synthesis Followed by 3D Printing. *J. Mater. Sci.* 2019, 54, 13901–13913, doi:10.1007/s10853-019-03872-3.
 189. Craciun, F.; Cordero, F.; Cernea, M.; Fruth, V.; Atkinson, I.; Stanica, N.; Vasile, B.S.; Trusca, R.; Iuga, A.; Galizia, P.; et al. Multiferroic (Nd,Fe)-Doped PbTiO_3 Ceramics with Coexistent Ferroelectricity and Magnetism at Room Temperature. *Ceram. Int.* 2019, 45, 9390–9396, doi:10.1016/j.ceramint.2018.08.147.
 190. Cernea, M.; Vasile, B.S.; Ciuchi, I. V.; Surdu, V.A.; Bartha, C.; Iuga, A.; Galizia, P.; Galassi, C. Composite BNT-BT0. 08/ CoFe_2O_4 with Core-Shell Nanostructure for Piezoelectric and Ferromagnetic Applications. *Mater. Sci. Eng. B* 2019, 240, 7–15.
 191. Popescu, R.C.; Savu, D.; Dorobantu, I.; Vasile, B.S.; Hosser, H.; Schneider, F.; Boldeiu, A.; Andronescu, E.; Wenz, F.; Giordano, F.A.; et al. Radiation Sensitization of Tumor Cells by Intracellular Accumulation of Doxorubicin by Using Iron Oxide Nanoparticles. In *Proceedings of the STRAHLENTHERAPIE UND ONKOLOGIE*; 2019; Vol. 195, pp. S92–S93.
 192. Popescu, R.C.; Savu, D.; Dorobantu, I.; Vasile, B.S.; Hosser, H.; Schneider, F.; Boldeiu, A.; Andronescu, E.; Wenz, F.; Giordano, F.A.; et al. Radiosensitization of Tumor Cells by Intracellular Delivery of Doxorubicin Using Novel Iron Oxide-Based Nanoconstructs. *Int. J. Radiat. Oncol. Biol. Phys.* 2019, 105, E681.
 193. Ficai, A.; Ficai, D.; Vasile, B.S.; Mihaiescu, D.E.; Purcarea, B.; Popa, M.; Chifiriuc, C.M. Antibiotic Incidence, Distribution and Resistance in Wastewaters. *Multidiscip. Digit. Publ. Inst. Proc.* 2019, 29, 119.
 194. Stanciu, C.A.; Pintilie, I.; Surdu, A.; Trusca, R.; Vasile, B.S.; Eftimie, M.; Ianculescu, A.C. Influence of Sintering Strategy on the Characteristics of Sol-Gel $\text{Ba}_{1-x}\text{Ce}_x\text{Ti}_{1-x}/4\text{O}_3$ Ceramics. *Nanomaterials* 2019, 9, 1675.
 195. Grumezescu, V.; Negut, I.; Grumezescu, A.M.; Ficai, A.; Dorcioman, G.; Socol, G.; Iordache, F.; Truşcă, R.; Vasile, B.S.; Holban, A.M. MAPLE Fabricated Coatings Based on

- Magnetite Nanoparticles Embedded into Biopolymeric Spheres Resistant to Microbial Colonization. *Appl. Surf. Sci.* 2018, 448, 230–236, doi:10.1016/j.apsusc.2018.04.053.
196. Cernea, M.; Vasile, B.S.; Ciuchi, I.V.; Surdu, V.A.; Bartha, C.; Iuga, A.; Galizia, P.; Galassi, C. Synthesis and Characterization of Novel Ferrite–Piezoelectric Multiferroic Core–Shell-Type Structure. *J. Mater. Sci.* 2018, 53, 9650–9661, doi:10.1007/s10853-018-2264-x.
 197. Mihalache, M.; Oprea, O.; Vasile, B.Ş.; Guran, C.; Ardelean, I.L. Synthesis, Characterization and Biological Activity of Composite Combinations of Cu(II), Fe(III) and Mn(III) with α -Ketoglutaric Acid and 1-(o-Tolyl) Biguanide. *UPB Sci. Bull. Ser. B Chem. Mater. Sci.* 2018, 80, 113–126.
 198. Craciun, F.; Cordero, F.; Vasile, B.S.; Fruth, V.; Zaharescu, M.; Atkinson, I.; Trusca, R.; Diamandescu, L.; Tanase, L.C.; Galizia, P.; et al. Combined Use of Mössbauer Spectroscopy, XPS, HRTEM, Dielectric and Anelastic Spectroscopy for Estimating Incipient Phase Separation in Lead Titanate-Based Multiferroics. *Phys. Chem. Chem. Phys.* 2018, 20, 14652–14663, doi:10.1039/c8cp01456f.
 199. Senin, R.M.; Ion, I.; Oprea, O.; Vasile, B.; Stoica, R.; Ganea, R.; Ion, A.C. Sorption of Bisphenol A (BPA) In Aqueous Solutions on Fullerene C60. *Rev. Chim.* 2018, 69, 1309–1314, doi:10.37358/rc.18.6.6316.
 200. Avram, D.; Tiseanu, I.; Vasile, B.S.; Florea, M.; Tiseanu, C. Near Infrared Emission Properties of Er Doped Cubic Sesquioxides in the Second/Third Biological Windows. *Sci. Rep.* 2018, 8, doi:10.1038/s41598-018-36639-y.
 201. Temelie, M.; Popescu, R.C.; Cocioaba, D.; Vasile, B.S.; Savu, D. Biocompatibility Study of Magnetite Nanoparticle Synthesized Using a Green Method. *Rom. J. Phys.* 2018, 63.
 202. Cernea, M.; Vasile, B.S.; Surdu, V.A.; Trusca, R.; Bartha, C.; Craciun, F.; Galassi, C. Electric and Magnetic Properties of Ferromagnetic/Piezoelectric Bilayered Composite. *J. Mater. Sci.* 2018, 53, 14160–14171, doi:10.1007/s10853-018-2673-x.
 203. Popescu-Pelin, G.; Fufă, O.; Popescu, R.C.; Savu, D.; Socol, M.; Zgură, I.; Holban, A.M.; Vasile, B.Ş.; Grumezescu, V.; Socol, G. Lincomycin–Embedded PANI–Based Coatings for Biomedical Applications. *Appl. Surf. Sci.* 2018, 455, 653–666, doi:10.1016/j.apsusc.2018.06.016.
 204. Cernea, M.; Vasile, B.S.; Surdu, V.A.; Trusca, R.; Sima, M.; Craciun, F.; Galassi, C. Piezoelectric/Ferromagnetic BNT-BT0.08/CoFe2O4 Coaxial Core–Shell Composite Nanotubes for Nanoelectronic Devices. *J. Alloys Compd.* 2018, 752, 381–388, doi:10.1016/j.jallcom.2018.04.146.
 205. Cernea, M.; Vasile, B.S.; Surdu, V.A.; Trusca, R.; Craciun, F.; Galassi, C. Synthesis and Characterization of CoFe2O4/BNT-BT0.08 Core–Shell Nanotubes by a Template Based Sol-Gel Method. *Ceram. Int.* 2018, 44, 10813–10819, doi:10.1016/j.ceramint.2018.03.123.

206. Cri\csan, M.; Mardare, D.; Ianculescu, A.; Dr\ugan, N.; Ni\ctoi, I.; Cri\csan, D.; Voicescu, M.; Todan, L.; Oancea, P.; Adomni\ctei, C.; et al. Iron Doped TiO₂ Films and Their Photoactivity in Nitrobenzene Removal from Water. *Appl. Surf. Sci.* 2018, 455, 201–215.
207. Negut, I.; Grumezescu, V.; Fikai, A.; Grumezescu, A.M.; Holban, A.M.; Popescu, R.C.; Savu, D.; Vasile, B.S.; Socol, G. MAPLE Deposition of Nigella Sativa Functionalized Fe₃O₄ Nanoparticles for Antimicrobial Coatings. *Appl. Surf. Sci.* 2018, 455, 513–521.
208. Colie, M.; Mihaiescu, D.E.; Istrati, D.; Surdu, A.V.; Vasile, B.; Stanica, N.; Fudulu, A.; Andronescu, E. Synthesis and Characterization of a Core-Shell Material Using YBa₂Cu₃O₇-Delta and Cobalt Ferrite Nanoparticles. *Rev. Chim.* 2018, 69, 3345–3348.
209. ALSABTI, M.A.; CIUCA, I.; VASILE, B. \cSTEFAN; TRUSCA, R.; Alaa, A. Effect of Surface Roughness Ti6Al4V Modified by Hydroxyapatite Coating. *Ann. “Dunarea Jos” Univ. Galati. Fascicle IX, Metall. Mater. Sci.* 2018, 41, 41–48.
210. Balaure, P.C.; Boarca, B.; Popescu, R.C.; Savu, D.; Trusca, R.; Vasile, B. Ş.; Grumezescu, A.M.; Holban, A.M.; Bolocan, A.; Andronescu, E. Bioactive Mesoporous Silica Nanostructures with Anti-Microbial and Anti-Biofilm Properties. *Int. J. Pharm.* 2017, 531, 35–46, doi:10.1016/j.ijpharm.2017.08.062.
211. Popescu, R.C.; Andronescu, E.; Vasile, B. Ş; Truşcă, R.; Boldeiu, A.; Mogoantă, L.; Mogoşanu, G.D.; Temelie, M.; Radu, M.; Grumezescu, A.M.; et al. Fabrication and Cytotoxicity of Gemcitabine-Functionalized Magnetite Nanoparticles. *Molecules* 2017, 22, doi:10.3390/molecules22071080.
212. Ardelean, I.L.; Stoencea, L.B.N.; Fikai, D.; Fikai, A.; Trusca, R.; Vasile, B.S.; Nechifor, G.; Andronescu, E. Development of Stabilized Magnetite Nanoparticles for Medical Applications. *J. Nanomater.* 2017, 2017, doi:10.1155/2017/6514659.
213. Fikai, A.; Sonmez, M.; Trusca, R.D.; Vasile, B.S.; Fikai, D.; Andronescu, E. Design of TiO_xNy for Developing Layered Stent Technology. In *Proceedings of the World Congress on Recent Advances in Nanotechnology*; 2017.
214. Fikai, A.; Fikai, D.; Vasile, B.S.; Trusca, R.D.; Gudovan, D.; Oprea, O.; Ludmila, M.; Andronescu, E. Design of TiO_xNy for Coating Technology. In *Proceedings of the Proceedings of the World Congress on New Technologies*; 2017.
215. Grumezescu, A.M.; Fikai, A.; Fikai, D.; Holban, A.M.; Vasile, B.S.; Andronescu, E. Biomaterials Based on Functional Graphene Oxide and Natural Compounds with Improved Biocompatibility, Biodistribution and Low Immunomodulatory Effects. In *Proceedings of the FEBS JOURNAL*; 2017; Vol. 284, p. 328.
216. Daly, A. Ben; Craciun, D.; Ursu, E.L.; Lema\^{\i}tre, A.; Maaref, M.A.; Iacomì, F.; Vasile, B.S.; Craciun, V. Optical and Structural Properties in Type-II InAlAs/AlGaAs Quantum Dots Observed by Photoluminescence, X-Ray Diffraction and Transmission Electron Microscopy. *Superlattices Microstruct.* 2017, 110, 1–9.

217. Ardelean, I.L.; Stoencea, L.B.N.; Ficai, D.; Ficai, A.; Trusca, R.; Vasile, B.S.; Nechifor, G.; Andronesu, E. Research Article Development of Stabilized Magnetite Nanoparticles for Medical Applications. 2017.
218. Mihaiescu, D.E.; Istrati, D. Moros, An. J. Colloid Interface Sci 2017, 497, 217–225.
219. Cernea, M.; Ianculescu, A.C.; Vasile, B.S.; Vasilescu, C.A. Nanotubes of Ba_{0.95}Ce_{0.05}Ti_{0.9875}O₃ Prepared by Sol-Gel Chemistry. UPB Sci. Bull. Ser. B Chem. Mater. Sci. 2016, 78, 51–58.
220. VASILE, O.; Andronesu, E.; Trusca, R.; Oprea, O.; Vasile, E.; Vasile, B.S. Optical properties of pyrosol synthesized tio₂ nanostructures. Univ. Politeh. BUCHAREST Sci. Bull. Ser. B-CHEMISTRY Mater. Sci. 2016, 78, 75–86.
221. Colie, M.; Mihaiescu, D.; Surdu, A.; Trusca, R.; Vasile, B.; Istrati, D.; Ficai, A.; Plapcianu, C.; Andronesu, E. High Temperature Superconducting Materials Based on Graphene / YBCO Nanocomposite. In Proceedings of the Materials Today: Proceedings; 2016; Vol. 3, pp. 2628–2634.
222. Stan, M.S.; Constanda, S.; Grumezescu, V.; Andronesu, E.; Ene, A.M.; Holban, A.M.; Vasile, B.S.; Mogoantă, L.; Bălșeanu, T.-A.; Mogoșanu, G.D.; et al. Thin Coatings Based on ZnO@C -Usnic Acid Nanoparticles Prepared by MAPLE Inhibit the Development of Salmonella Enterica Early Biofilm Growth. Appl. Surf. Sci. 2016, 374, 318–325, doi:10.1016/j.apsusc.2015.12.063.
223. Ianculescu, A.-C.; Berger, D.C.; Vasilescu, C.A.; Olariu, M.; Vasile, B.S.; Curecheriu, L.P.; Gajović, A.; Trușcă, R. Incorporation Mechanism and Functional Properties of Ce-Doped BaTiO₃ Ceramics Derived from Nanopowders Prepared by the Modified Pechini Method; 2016;
224. Popescu, S.; Ardelean, I.L.; Gudovan, D.; Rădulescu, M.; Ficai, D.; Ficai, A.; Vasile, B.Ș.; Andronesu, E. Multifunctional Materials Such as MCM-41/Fe₃O₄/Folic Acid as Drug Delivery System. Rom. J. Morphol. Embryol. 2016, 57, 483–489.
225. Craciun, D.; Socol, G.; Simeone, D.; Behdad, S.; Boesl, B.; Vasile, B.S.; Craciun, V. Structural and Mechanical Properties Changes Induced in Nanocrystalline ZrC Thin Films by Ar Ion Irradiation. J. Nucl. Mater. 2016, 468, 78–83, doi:10.1016/j.jnucmat.2015.11.012.
226. Karacan, I.; Senturk, D.; Oktar, F.N.; Ficai, A.; Ficai, D.; Trusca, R.; Vasile, B.S.; Gokce, H.; Ozuyar, H.D.; Gunduz, O. Structural and Characterisation Analysis of Zinc-Substituted Hydroxyapatite with Wet Chemical Precipitation Method. Int. J. Nano Biomater. 2016, 6, 188–204, doi:10.1504/IJNBM.2016.086110.
227. Radulescu, M.; Arsenie, L. V; Oprea, O.; Vasile, B.S. Optical and Photocatalytic Properties of Copper(II) Doped Zinc Oxide. Rev. Chim. 2016, 67, 2596–2599.

228. Ardelean, I.L.; Popa, M.; Ficai, D.; Ficai, A.; Vasile, B.; Sonmez, M.; Nechifor, G.; Andronesu, E. MCM41/Fe₃O₄/EDTA Materials from Removal Different Cation from Waste Water. In Proceedings of the Proceedings of the World Congress on New Technologies; 2016.
229. Ianculescu, A.-C.; Vasilescu, C.-A.; Trupina, L.; Vasile, B.S.; Trusca, R.; Cernea, M.; Pintilie, L.; Nicoară, A. Characteristics of Ce³⁺-Doped Barium Titanate Nanoshell Tubes Prepared by Template-Mediated Colloidal Chemistry. *J. Eur. Ceram. Soc.* 2016, 36, 1633–1642, doi:10.1016/j.jeurceramsoc.2016.01.045.
230. Ion, A.; Andronesu, E.; Țădulescu, D.; Țădulescu, M.; Iordache, F.; Vasile, B.S.; Surdu, A. V.; Albu, M.G.; Maniu, H.; Chifiriuc, M.C.; et al. Biocompatible 3d Matrix with Antimicrobial Properties. *Molecules* 2016, 21, doi:10.3390/molecules21010115.
231. Neacșu, I.A.; Nicoară, A.I.; Vasile, O.R.; Vasile, B. Ștefan Inorganic Micro-and Nanostructured Implants for Tissue Engineering. In *Nanobiomaterials in Hard Tissue Engineering*; William Andrew Publishing, 2016; pp. 271–295.
232. Dan, E.M.; Gudovan, D.; Traistaru, V.; Ionescu, P.; Fudulu, A.; Voicu, G.; Ficai, A.; TRUȘCĂ, R.; Istrati, D.; Marton, A.; et al. Synthesis of Silver Secondary Shell Magnetic Nanoparticles. *Rev. Roum. Chim* 2016, 61, 105–110.
233. Țădulescu, D.; Voicu, G.; Oprea, A.E.; Andronesu, E.; Grumezescu, V.; Holban, A.M.; Vasile, B.S.; Surdu, A.V.; Grumezescu, A.M.; Socol, G.; et al. Mesoporous Silica Coatings for Cephalosporin Active Release at the Bone-Implant Interface. *Appl. Surf. Sci.* 2016, 374, 165–171.
234. BORTNIC, R.-A.; GOGA, F.; MESARUȘ, A.; Nasui, M.; Vasile, B.S.; Roxana, D.; Avram, A. Synthesis of cobalt ferrite nanoparticles via a sol-gel combustion method. *Stud. Univ. Babes-Bolyai, Chem.* 2016, 61.
235. Țădulescu, M.; Andronesu, E.; Holban, A.M.; Vasile, B.S.; Iordache, F.; Mogoantă, L.; Mogoșanu, G.D.; Grumezescu, A.M.; Georgescu, M.; Chifiriuc, M.C. Antimicrobial Nanostructured Bioactive Coating Based on Fe₃O₄ and Patchouli Oil for Wound Dressing. *Metals (Basel)*. 2016, 6, 103.
236. Neacșu, I.A.; Nicoară, A.I.; Vasile, O.R.; Vasile, B. Inorganic Micro-and Nanostructured Implants for Tissue Engineering, *Nanobiomaterials in Hard Tissue Engineering*. 2016.
237. Ianculescu, A.; Berger, D.C.; Vasilescu, C.A.; Olariu, M.; Vasile, B.S.; Curecheriu, L.P.; Gajovic, A.; Trusca, R. *Nanoscale Ferroelectrics and Multiferroics*, Edited by M. Algueró, JM Gregg & L. Mitoseriu 2016.
238. Patrascu, J.M.; Nedelcu, I.A.; Sonmez, M.; Ficai, D.; Ficai, A.; Vasile, B.S.; Ungureanu, C.; Albu, M.G.; Andor, B.; Andronesu, E.; et al. Composite Scaffolds Based on Silver Nanoparticles for Biomedical Applications. *J. Nanomater.* 2015, 2015, doi:10.1155/2015/587989.

239. Cernea, M.; Vasile, B.S.; Ganea, P.; Radu, R.; Mihalache, V.; Husanu, A. Dielectric and Ferroelectric Characterization of Ba_{0.95}Tm_{0.05}TiO₃ Ceramics Derived from Sol to Gel. *J. Am. Ceram. Soc.* 2011, 94, 736–741, doi:10.1111/j.1551-2916.2010.04179.x.
240. Al Tameemi, M.B.M.; Mihaiescu, D.; Stan, R.; Meghea, A.; Voicu, G.; Vasile, B.S.; Traistaru, V.; Istrati, D. Novel Nanostructured Molecular Sieves of Silica with Included Titanium Dioxide: Preparation and Characteristics. *Dig. J. Nanomater. Biostructures* 2015, 10, 1229–1235.
241. Mesaros, A.; Toloman, D.; Nasui, M.; Mos, R.B.; Petrisor, T.; Vasile, B.S.; Surdu, V.A.; Perhaita, I.; Biris, A.; Pana, O. A Valence States Approach for Luminescence Enhancement by Low Dopant Concentration in Eu-Doped ZnO Nanoparticles. *J. Mater. Sci.* 2015, 50, 6075–6086, doi:10.1007/s10853-015-9157-z.
242. Ianculescu, A.C.; Vasilescu, C.A.; Crisan, M.; Raileanu, M.; Vasile, B.S.; Calugaru, M.; Crisan, D.; Dragan, N.; Curecheriu, L.; Mitoseriu, L. Formation Mechanism and Characteristics of Lanthanum-Doped BaTiO₃ Powders and Ceramics Prepared by the Sol-Gel Process. *Mater. Charact.* 2015, 106, 195–207, doi:10.1016/j.matchar.2015.05.022.
243. Soenmez, M.; Gudovan, D.; TRUȘCA, R.; Ficai, A.; Ficai, D.; Andronescu, E.; Vasile, B.S. Synthesis, characterization and testing of mcm-41/tio₂ catalyst for organic dye degradation. *Dig. J. Nanomater. Biostructures* 2015, 10, 1329–1341.
244. Vasile, O.R.; Serdaru, I.; Andronescu, E.; Trușcă, R.; Surdu, V.A.; Oprea, O.; Ilie, A.; Vasile, B.S. Influence of the Size and the Morphology of ZnO Nanoparticles on Cell Viability. *Comptes Rendus Chim.* 2015, 18, 1335–1343, doi:10.1016/j.crci.2015.08.005.
245. Kalyani, V.; Vasile, B.S.; Ianculescu, A.; Testino, A.; Carino, A.; Buscaglia, M.T.; Buscaglia, V.; Nanni, P. Hydrothermal Synthesis of SrTiO₃: Role of Interfaces. *Cryst. Growth Des.* 2015, 15, 5712–5725, doi:10.1021/acs.cgd.5b00770.
246. Miu, D.; Jinga, S.I.; Vasile, B.S.; Miu, L. Out of Plane Superferromagnetic Behavior of Quasi Two-Dimensional Fe/Al₂O₃ Multilayer Nanocomposites. *J. Appl. Phys.* 2015, 117, doi:10.1063/1.4908219.
247. Spoiala, A.; Voicu, G.; Ficai, D.; Ungureanu, C.; Albu, M.G.; Vasile, B.S.; Ficai, A.; Andronescu, E. Collagen/TiO₂-Ag Composite Nanomaterials for Antimicrobial Applications. *UPB Sci. Bull. Ser. B Chem. Mater. Sci.* 2015, 77, 275–290.
248. Pavel, E.; Jinga, S.I.; Vasile, B.S.; Dinescu, A.; Trusca, R.; Tosa, N. 3D Direct Laser Writing of Petabyte Optical Disk. *Opt. Laser Technol.* 2015, 71, 45–49, doi:10.1016/j.optlastec.2015.02.011.
249. Piticescu, R.R.; Valsan, S.N.; Petriceanu, M.; Badilita, V.; Tudor, I.A.; Taloi, D.; Vasile, B.; Raita, O. Kinetic Studies on the Hydrothermal Crystallization of Co-Doped Nanostructured TiO₂ Anatase with Ferromagnetic Properties. *J. Optoelectron. Adv. Mater.* 2015, 17, 646–654.

250. Secu, M.; Cernea, M.; Secu, C.E.; Vasile, B.S. Structural and Optical Properties of Fluorescent BaFBr-Eu²⁺@SiO₂ Core/Shell Phosphor Heterostructure. *Mater. Chem. Phys.* 2015, 151, 81–86, doi:10.1016/j.matchemphys.2014.11.038.
251. Cernea, M.; Vasile, B.S.; Ciuchi, I. V.; Iuga, A.; Alexandrescu, E.; Pinte, J.; Galassi, C. Synthesis, Structural and Electrical Properties of BNT-BTCe@SiO₂ Core-Shell Heterostructure. *Sci. Adv. Mater.* 2015, 7, 2297–2305, doi:10.1166/sam.2015.2287.
252. Vasilescu, C.-A.; Trupina, L.; Vasile, B.S.; Trusca, R.; Cernea, M.; Ianculescu, A.-C. Characteristics of 5 Mol% Ce³⁺-Doped Barium Titanate Nanowires Prepared by a Combined Route Involving Sol–Gel Chemistry and Polycarbonate Membrane-Templated Process. *J. Nanoparticle Res.* 2015, 17, 1–8, doi:10.1007/s11051-015-3241-9.
253. Bolocan, A.; Mihaiescu, D.E.; Andronescu, E.; Voicu, G.; Grumezescu, A.M.; Ficai, A.; Vasile, B.S.; Bleotu, C.; Chifiriuc, M.C.; Pop, C.S. Biocompatible Hydrodispersible Magnetite Nanoparticles Used as Antibiotic Drug Carriers. *Rom. J. Morphol. Embryol.* 2015, 56, 365–370.
254. Crișsan, M.; Răuileanu, M.; Drăgan, N.; Crișsan, D.; Ianculescu, A.; Nicotoi, I.; Oancea, P.; Șomănescu, S.; Stănică, N.; Vasile, B.; et al. Sol–Gel Iron-Doped TiO₂ Nanopowders with Photocatalytic Activity. *Appl. Catal. A Gen.* 2015, 504, 130–142.
255. Tăbăcaru, A.; Mușat, V.; Tigău, N.; Vasile, B.; Ștefan; Surdu, V.-A. Vinyltrimethoxysilane-Modified Zinc Oxide Quantum Dots with Tuned Optical Properties. *Appl. Surf. Sci.* 2015, 359, 766–773.
256. Patrascu, J.M.; Nedelcu, I.A.; Sonmez, M.; Ficai, D.; Ficai, A.; Vasile, B.S.; Ungureanu, C.; Albu, M.G.; Andor, B.; Andronescu, E.; et al. Research Article Composite Scaffolds Based on Silver Nanoparticles for Biomedical Applications. 2015.
257. Vasile, O.-R.; Andronescu, E.; Ghițulică, C.; Vasile, B.S.; Vasile, E. Grain Size Effect on Photocatalytic Properties of Nanocrystalline ZnO. *UPB Sci. Bull. Ser. B Chem. Mater. Sci.* 2014, 76, 3–12.
258. Istrate, C.M.; Holban, A.M.; Grumezescu, A.M.; Mogoantă, L.; Mogoșanu, G.D.; Savopol, T.; Moises, M.; Iordache, M.; Vasile, B.S.; Kovacs, E. Iron Oxide Nanoparticles Modulate the Interaction of Different Antibiotics with Cellular Membranes. *Rom. J. Morphol. Embryol.* 2014, 55, 849–856.
259. Cernea, M.; Vasile, B.S.; Boni, A.; Iuga, A. Synthesis, Structural Characterization and Dielectric Properties of Nb Doped BaTiO₃/SiO₂ Core-Shell Heterostructure. *J. Alloys Compd.* 2014, 587, 553–559, doi:10.1016/j.jallcom.2013.10.228.
260. Sommariva, M.; Gateshki, M.; Gertenbach, J.-A.; Bolze, J.; König, U.; Vasile, B.S.; Surdu, V.-A. Characterizing Nanoparticles with a Laboratory Diffractometer: From Small-Angle to Total X-Ray Scattering. *Powder Diffr.* 2014, 29, S47–S53, doi:10.1017/S0885715614001043.

261. Grumezescu, V.; Holban, A.M.; Grumezescu, A.M.; Socol, G.; Fica, A.; Vasile, B.S.; Trușcă, R.; Bleotu, C.; Lazar, V.; Chifiriuc, C.M.; et al. Usnic Acid-Loaded Biocompatible Magnetic PLGA-PVA Microsphere Thin Films Fabricated by MAPLE with Increased Resistance to Staphylococcal Colonization. *Biofabrication* 2014, 6, doi:10.1088/1758-5082/6/3/035002.
262. Holban, A.M.; Grumezescu, V.; Grumezescu, A.M.; Vasile, B.S.; Trușcă, R.; Cristescu, R.; Socol, G.; Iordache, F. Antimicrobial Nanospheres Thin Coatings Prepared by Advanced Pulsed Laser Technique. *Beilstein J. Nanotechnol.* 2014, 5, 872–880, doi:10.3762/bjnano.5.99.
263. Grumezescu, A.M.; Ghitulica, C.D.; Voicu, G.; Huang, K.-S.; Yang, C.-H.; Fica, A.; Vasile, B.S.; Grumezescu, V.; Bleotu, C.; Chifiriuc, M.C. New Silica Nanostructure for the Improved Delivery of Topical Antibiotics Used in the Treatment of Staphylococcal Cutaneous Infections. *Int. J. Pharm.* 2014, 463, 170–176, doi:10.1016/j.ijpharm.2013.07.016.
264. Manea, A.-M.; Vasile, B.S.; Meghea, A. Antioxidant and Antimicrobial Activities of Green Tea Extract Loaded into Nanostructured Lipid Carriers. *Comptes Rendus Chim.* 2014, 17, 331–341, doi:10.1016/j.crci.2013.07.015.
265. Matei, C.; Berger, D.; Vasile, B.S. Synthesis of Poly (Vinylpyrrolidone) Protected Pd-Ag Bimetallic Nanoparticles by Polyol Method. *Mater. Plast.* 2014, 51, 6–11.
266. Cernea, M.; Trupina, L.; Vasile, B.S.; Bartha, C.; Radu, R.; Chirila, C.; Teodorescu, A. BiFeO₃ Doped-BNT-BT_{0.08} Piezoelectric and Magnetic Nanowires, Derived from Sol-Gel Precursor. *J. Nanoparticle Res.* 2014, 16, doi:10.1007/s11051-013-2231-z.
267. Pavel, E.; Jinga, S.I.; Vasile, B.S.; Dinescu, A.; Marinescu, V.; Trusca, R.; Tosa, N. Quantum Optical Lithography from 1 Nm Resolution to Pattern Transfer on Silicon Wafer. *Opt. Laser Technol.* 2014, 60, 80–84, doi:10.1016/j.optlastec.2014.01.016.
268. Miu, D.; Sima, C.; Jinga, S.I.; Vasile, B.S.; Miu, L. A Simple Approach for the Magnetic Relaxation in Systems of Weakly-Interacting, Dispersive Nanoparticles in Applied Magnetic Field. *J. Supercond. Nov. Magn.* 2014, 27, 781–785, doi:10.1007/s10948-013-2345-7.
269. Grumezescu, V.; Holban, A.M.; Iordache, F.; Socol, G.; Mogoșanu, G.D.; Grumezescu, A.M.; Fica, A.; Vasile, B.S.; Trușcă, R.; Chifiriuc, M.C.; et al. MAPLE Fabricated Magnetite@eugenol and (3-Hidroxybutyric Acid-Co-3-Hidroxyvaleric Acid)-Polyvinyl Alcohol Microspheres Coated Surfaces with Anti-Microbial Properties. *Appl. Surf. Sci.* 2014, 306, 16–22, doi:10.1016/j.apsusc.2014.01.126.
270. Niculae, G.; Lacatusu, I.; Badea, N.; Stan, R.; Vasile, B.S.; Meghea, A. Rice Bran and Raspberry Seed Oil-Based Nanocarriers with Self-Antioxidative Properties as Safe Photoprotective Formulations. *Photochem. Photobiol. Sci.* 2014, 13, 703–716, doi:10.1039/c3pp50290b.

271. Grumezescu, A.M.; Gesta, M.C.; Holban, A.M.; Grumezescu, V.; Vasile, B.S.; Mogoanta, L.; Iordache, F.; Bleotu, C.; Dan Mogosanu, G. Biocompatible Fe₃O₄ Increases the Efficacy of Amoxicillin Delivery against Gram-Positive and Gram-Negative Bacteria. *Molecules* 2014, 19, 5013–5027, doi:10.3390/molecules19045013.
272. Nasui, M.; Petrisor Jr., T.; Mos, R.B.; Mesaros, A.; Varga, R.A.; Vasile, B.S.; Ristoiu, T.; Ciontea, L.; Petrisor, T. Synthesis, Crystal Structure and Thermal Decomposition Kinetics of Yttrium Propionate. *J. Anal. Appl. Pyrolysis* 2014, 106, 92–98, doi:10.1016/j.jaap.2014.01.004.
273. Poinescu, A.A.; Radulescu, C.; Vasile, B.S.; Ionita, I. Research Regarding Sol-Gel Hydroxyapatite Coating on 316L Stainless Steel. *Rev. Chim.* 2014, 65, 1245–1248.
274. Grumezescu, A.M.; Holban, A.M.; Andronescu, E.; Mogoșanu, G.D.; Vasile, B.S.; Chifiriuc, M.C.; Lazar, V.; Andrei, E.; Constantinescu, A.; Maniu, H. Anionic Polymers and 10 Nm Fe₃O₄@UA Wound Dressings Support Human Foetal Stem Cells Normal Development and Exhibit Great Antimicrobial Properties. *Int. J. Pharm.* 2014, 463, 146–154, doi:10.1016/j.ijpharm.2013.08.026.
275. Ungureanu, A.-M.; Oprea, O.; Vasile, B.S.; Andronescu, C.; Voicu, G.; Jitaru, I. Temperature Effect over Structure and Photochemical Properties of Nanostructured SnO₂ Powders. *Cent. Eur. J. Chem.* 2014, 12, 909–917, doi:10.2478/s11532-013-0400-7.
276. Drăgan, N.; Crișan, M.; Răileanu, M.; Crișan, D.; Ianculescu, A.; Oancea, P.; Șomărescu, S.; Todan, L.; Stănică, N.; Vasile, B. The Effect of Co Dopant on TiO₂ Structure of Sol–Gel Nanopowders Used as Photocatalysts. *Ceram. Int.* 2014, 40, 12273–12284.
277. Craciun, F.; Dimitriu, E.; Grigoras, M.; Lupu, N.; Vasile, B.S.; Cernea, M. The Emergence of Magnetic Properties in (Pb_{0.845}Sm_{0.08}Fe_{0.035})(Ti_{0.98}Mn_{0.02})O₃ and (Pb_{0.88}Nd_{0.08})(Ti_{0.98}Mn_{0.02})O₃ Perovskite Ceramics. *J. Appl. Phys.* 2014, 116.
278. Limban, C.; Missir, A.V.; Grumezescu, A.M.; Oprea, A.E.; Grumezescu, V.; Vasile, B. Ștefan; Socol, G.; Trușcă, R.; Caproiu, M.T.; Chifiriuc, M.C.; et al. Bioevaluation of Novel Anti-Biofilm Coatings Based on PVP/Fe₃O₄ Nanostructures and 2-((4-Ethylphenoxy) Methyl)-N-(Arylcabamothioyl) Benzamides. *Molecules* 2014, 19, 12011–12030.
279. Matei, C.; Covaliu, C.I.; Vasile, B.S.; Berger, D. Sinteza nanoparticulelor de oxid de ceriu cu morfologie controlata/synthesis of ceria nanoparticles with controlled morphology. *Rev. Rom. Mater.* 2014, 44, 74.
280. Mușat, V.; Tăbăcaru, A.; Vasile, B. Ștefan; Surdu, V.-A. Size-Dependent Photoluminescence of Zinc Oxide Quantum Dots through Organosilane Functionalization. *RSC Adv.* 2014, 4, 63128–63136.

281. Craciun, F.; Dimitriu, E.; Grigoras, M.; Lupu, N.; Vasile, B.S.; Cernea, M. The Emergence of Magnetic Properties in $(\text{Pb}_{0.845}\text{Sm}_{0.08}\text{Fe}_{0.035})(\text{Ti}_{0.98}\text{Mn}_{0.02}\text{O}_3)$ and $(\text{Pb}_{0.88}\text{Nd}_{0.08})(\text{Ti}_{0.98}\text{Mn}_{0.02}\text{O}_3)$. J. Appl. Phys. 2014, 116.
282. Costescu, A.; Andronescu, E.; Vasile, B.S.; Trusca, R.; Le Coustumer, P.; Barna, E.S.; Iconaru, S.L.; Montelica-Heino, M.; Ciobanu, C.S. Synthesis and Characterisation of Dextran Coated Hydroxyapatite for Environmental Applications. U Politeh B. Sci Bull Ser B 2014, 76, 71–80.
283. Grumezescu, A.M.; Cotar, A.I.; Andronescu, E.; Ficai, A.; Ghitulica, C.D.; Grumezescu, V.; Vasile, B.S.; Chifiriuc, M.C. In Vitro Activity of the New Water-Dispersible Fe_3O_4 @usnic Acid Nanostructure against Planktonic and Sessile Bacterial Cells. J. Nanoparticle Res. 2013, 15, doi:10.1007/s11051-013-1766-3.
284. Popa, M.; Mesaros, A.; Mereu, R.A.; Suciu, R.; Vasile, B.S.; Gabor, M.S.; Ciontea, L.; Petrisor, T. Optical Properties Correlated with Morphology and Structure of TEAH Modified ZnO Nanoparticles via Precipitation Method. J. Alloys Compd. 2013, 574, 255–259, doi:10.1016/j.jallcom.2013.04.078.
285. Cernea, M.; Trupina, L.; Vasile, B.S.; Trusca, R.; Chirila, C. Nanotubes of Piezoelectric BNT-BT0.08 Obtained from Sol-Gel Precursor. J. Nanoparticle Res. 2013, 15, doi:10.1007/s11051-013-1787-y.
286. Ciobanu, C.S.; Iconaru, S.L.; Pasuk, I.; Vasile, B.S.; Lupu, A.R.; Hermenean, A.; Dinischiotu, A.; Predoi, D. Structural Properties of Silver Doped Hydroxyapatite and Their Biocompatibility. Mater. Sci. Eng. C 2013, 33, 1395–1402, doi:10.1016/j.msec.2012.12.042.
287. Valsan, S.N.; Tudor, I.A.; Badilita, V.; Vasile, B.; Raita, O.; Piticescu, R.-R. Hydrothermal Synthesis and Characterization of Rod-like Co-Doped Anatase for Spintronic Applications. Optoelectron. Adv. Mater. Rapid Commun. 2013, 7, 1011–1014.
288. Toloman, D.; Mesaros, A.; Popa, A.; Raita, O.; Silipas, T.D.; Vasile, B.S.; Pana, O.; Giurgiu, L.M. Evidence by EPR of Ferromagnetic Phase in Mn-Doped ZnO Nanoparticles Annealed at Different Temperatures. J. Alloys Compd. 2013, 551, 502–507, doi:10.1016/j.jallcom.2012.10.183.
289. Voicu, G.; Oprea, O.; Vasile, B.S.; Andronescu, E. Antibacterial Activity of Zinc Oxide - Gentamicin Hybrid Material. Dig. J. Nanomater. Biostructures 2013, 8, 1191–1203.
290. Oprea, O.; Ghitulica, C.D.; Voicu, G.; Vasile, B.S.; Oprea, A. Synthesis and Photocatalytic Properties of Fe (III)-Doped TiO_2 Prepared by Sol-Gel Method. Rev. Rom. Mater. J. Mater. 2013, 43, 408–416.
291. Ficai, D.; Ficai, A.; Trusca, R.; Vasile, B.S.; Voicu, G.; Guran, C.; Andronescu, E. Synthesis and Characterization of Magnetite-Polysulfone Micro- and Nanobeads with

- Improved Chemical Stability in Acidic Media. *Curr. Nanosci.* 2013, 9, 271–277, doi:10.2174/1573413711309020017.
292. Voicu, G.; Oprea, O.; Vasile, B.S.; Andronesu, E. Photoluminescence and Photocatalytic Activity of Mn- Doped ZnO Nanoparticles. *Dig. J. Nanomater. Biostructures* 2013, 8, 667–675.
 293. Pavel, E.; Jinga, S.; Andronesu, E.; Vasile, B.S.; Kada, G.; Sasahara, A.; Tosa, N.; Matei, A.; Dinescu, M.; Dinescu, A.; et al. 2 Nm Quantum Optical Lithography. *Opt. Commun.* 2013, 291, 259–263, doi:10.1016/j.optcom.2012.10.079.
 294. Iorgu, A.I.; Berger, D.; Alexandrescu, L.; Vasile, B.S.; Matei, C. Synthesis of Photoluminescent Pure and Doped Cadmium Sulfide by Reverse Microemulsion Method. *Chalcogenide Lett.* 2013, 10, 525–531.
 295. Tudor, A.I.; Valsan, S.N.; Piticescu, R.-R.; Badilita, V.; Vasile, B.; Predescu, C.; Geantă, V. Thermal Characterization of Co-Doped Tio₂ Nanopowders Obtained by a Hydrothermal Procedure. *Metal. Int.* 2013, 18, 142–146.
 296. Cernea, M.; Pintilie, L.; Trupina, L.; Vasile, B.S.; Chirila, C.; Pasuk, I. BNT-BT<inf>0.08</Inf> Wires Derived from Sol-Gel Precursor and Their Piezoelectric Behavior. *J. Nanoparticle Res.* 2013, 15, doi:10.1007/s11051-013-1668-4.
 297. Poinescu, A.A.; Ion, R.M.; Vasile, B. Hybrid Composite Materials with Biofunctional Properties. *J. Optoelectron. Adv. Mater.* 2013, 15, 874–878.
 298. Oprea, O.; Ghitulica, C.D.; Voicu, G.; Vasile, B.S.; Oprea, A. SInteza si proprietatile fotocatalitice ale tio² dopat cu fe (iii) preparat prin metoda sol-gel/synthesis and photocatalytic properties of fe (iii)-doped tio² prepared by sol-gel method. *Rev. Rom. Mater.* 2013, 43, 408.
 299. Grumezescu, A.M.; Vasile, B.S.; Holban, A.M. Eugenol Functionalized Magnetite Nanostructures Used in Anti-Infectious Therapy. *Lett. Appl. Nanobiosci* 2013, 2, 120–123.
 300. Cernea, M.; Secu, C.E.; Vasile, B.S.; Secu, M. Structural and Optical Characterization of Sol--Gel Derived Tm-Doped BaTiO₃ Nanopowders and Ceramics. *Curr. Appl. Phys.* 2013, 13, 137–141.
 301. Popa, A.; Toloman, D.; Raita, O.; Stan, M.; Vasile, B.S.; Leostean, C.; Giurgiu, L.M. Spin Dynamics Evidenced by EPR in Sn1- XMnxO₂ Nanoparticles Annealed at Different Temperatures. *J. Alloys Compd.* 2013, 551, 300–305.
 302. Lupuliasa, A.I.; Prisada, R.M.; Matei, R.I.; Avramescu, S.M.; Vasile, B.S.; Fierascu, R.C.; Fierascu, I. Voicu-B{\u{a}}las, Ea, B.; Meles, Canu Imre, M.; Pit, Uru, S. *Int. J. Chem* 2013, 1, 32–38.
 303. Andronesu, E.; Grumezescu, A.; Ficai, A.; Vasile, B.S.; Grumezescu, V.; Vasile, E.; Ficai, D. Fabrication of Iron Oxide Nanospheres Using Pyrosol Technique. In *Proceedings*

of the Proceedings of the 4th International Conference on Advanced Materials and Systems, ICAMS 2012; 2012; pp. 231–236.

304. Cernea, M.; Galassi, C.; Vasile, B.S.; Capiiani, C.; Berbecaru, C.; Pintilie, I.; Pintilie, L. Structural, Dielectric, and Piezoelectric Properties of Fine-Grained NBT-BT $\langle \text{inf} \rangle 0.11 \langle \text{inf} \rangle$ Ceramic Derived from Gel Precursor. *J. Eur. Ceram. Soc.* 2012, 32, 2389–2397, doi:10.1016/j.jeurceramsoc.2012.02.021.
305. Mihaiescu, D.E.; Grumezescu, A.M.; Buteica, A.S.; Mogosanu, D.E.; Balaure, P.C.; Mihaiescu, O.M.; Trăistaru, V.; Vasile, B.S. Bioassay and Electrochemical Evaluation of Controlled Release Behavior of Cephalosporins from Magnetic Nanoparticles. *Dig. J. Nanomater. Biostructures* 2012, 7, 253–260.
306. Cernea, M.; Trupina, L.; Dragoi, C.; Vasile, B.S.; Trusca, R. Structural and Piezoelectric Characteristics of BNT-BT 0.05 Thin Films Processed by Sol-Gel Technique. *J. Alloys Compd.* 2012, 515, 166–170, doi:10.1016/j.jallcom.2011.11.129.
307. Stroia, A.; Matei, C.; Vasile, B.S.; Oprea, O.; Covaliu, C.; Jitaru, I. A New Route for Synthesis and Characterization of Macroporous Granular Silver. *UPB Sci. Bull. Ser. B Chem. Mater. Sci.* 2012, 74, 7–18.
308. Cernea, M.; Vasile, B.S.; Capiiani, C.; Ioncea, A.; Galassi, C. Dielectric and Piezoelectric Behaviors of NBT-BT0.05 Processed by Sol-Gel Method. *J. Eur. Ceram. Soc.* 2012, 32, 133–139, doi:10.1016/j.jeurceramsoc.2011.07.038.
309. Cernea, M.; Poli, G.; Aldica, G. V; Berbecaru, C.; Vasile, B.S.; Galassi, C. Preparation and Properties of Nanocrystalline BNT-BT x Piezoelectric Ceramics by Sol-Gel and Spark Plasma Sintering. *Curr. Appl. Phys.* 2012, 12, 1100–1105, doi:10.1016/j.cap.2012.01.016.
310. Anghel, I.; Grumezescu, A.M.; Andronesco, E.; Anghel, A.G.; Ficai, A.; Saviuc, C.; Grumezescu, V.; Vasile, B.S.; Chifiriuc, M.C. Magnetite Nanoparticles for Functionalized Textile Dressing to Prevent Fungal Biofilms Development. *Nanoscale Res. Lett.* 2012, 7, doi:10.1186/1556-276X-7-501.
311. Negrea, D.; Ducu, C.; Moga, S.; Malinovschi, V.; Monty, C.J.A.; Vasile, B.; Dorobantu, D.; Enachescu, M. Solar Physical Vapor Deposition Preparation and Microstructural Characterization of TiO₂ Based Nanophases for Dye-Sensitized Solar Cell Applications. *J. Nanosci. Nanotechnol.* 2012, 12, 8746–8750, doi:10.1166/jnn.2012.6814.
312. Gabor, M.S.; Petrisor Jr, T.; Tiusan, C.; Hehn, M.; Vasile, B.S.; Petrisor, T. Influence of a TiO₂ Buffer Layer on the Magnetic Properties of Anatase Co: TiO₂ Thin Films. *J. Appl. Phys.* 2012, 111, 83917.
313. Sandu, V.; Cimpoiasu, E.; Aldica, G.; Popa, S.; Sandu, E.; St. Vasile, B.; Hurduc, N.; Nor, I. Use of Preceramic Polymers for Magnesium Diboride Composites. *Phys. C Supercond. its Appl.* 2012, 480, 102–107, doi:10.1016/j.physc.2012.03.052.

314. Cernea, M.; Fochi, F.; Aldica, G. V.; Vasile, B.S.; Trusca, R.; Galassi, C. Spark-Plasma-Sintering Temperature Dependence of Structural and Piezoelectric Properties of BNT-BT 0.08 Nanostructured Ceramics. *J. Mater. Sci.* 2012, 47, 3669–3673, doi:10.1007/s10853-011-6215-z.
315. R\uaileanu, M.; Todan, L.; Cri\csan, D.; Dr\uagan, N.; Cri\csan, M.; Stan, C.; Andronesu, C.; Voicescu, M.; Vasile, B.S.; Ianculescu, A. Sol--Gel Zirconia Nanopowders with α -Cyclodextrin as Organic Additive. *J. Alloys Compd.* 2012, 517, 157–163.
316. Grumezescu, A.M.; Andronesu, E.; Fikai, A.; Yang, C.-H.; Huang, K.-S.; Vasile, B.S.; Voicu, G.; Mihaiescu, D.E.; Bleotu, C.; others Magnetic Nanofluid with Antitumoral Properties. *source Lett. Appl. NanoBioScience* 2012, 1, 56–60.
317. Grumezescu, A.M.; Andronesu, E.; Fikai, A.; Mihaiescu, D.E.; Vasile, B.S.; Bleotu, C. Synthesis, Characterization and Biological Evaluation of a Fe₃O₄/C12core/Shell Nanosystem. *Lett. Appl. NanoBioSci* 2012, 1, 31–35.
318. Negrea, D.; Ducu, C.; Moga, S.; Malinovschi, V.; Monty, C.J.A.; Vasile, B.; Dorobantu, D.; Enachescu, M. Solar Physical Vapor Deposition Preparation and Microstructural Characterization of TiO. *Nanosci. Nanotechnol.* 2012, 12, 1–5.
319. Kalyani, V.; Vasile, B.S.; Ianculescu, A.; Buscaglia, M.T.; Buscaglia, V.; Nanni, P. Hydrothermal Synthesis of SrTiO₃ Mesocrystals: Single Crystal to Mesocrystal Transformation Induced by Topochemical Reactions. *Cryst. growth & Des.* 2012, 12, 4450–4456.
320. Rogojan, R.; Andronesu, E.; Voicu, G.; Vasile, B.S. Nanoalumina Obtained by Pyrosol Method. *Mater. Sci.* 2012, 30, 368–374.
321. Fikai, D.; Andronesu, E.; Fikai, A.; Voicu, G.; Vasile, B.; Ionita, V.; Guran, C. Synthesis and Characterization of Mesoporous Magnetite Based Nanoparticles. *Curr. Nanosci.* 2012, 8, 875–879.
322. Oprea, O.; Andronesu, E.; Vasile, B.S.; Voicu, G.; Covaliu, C. Synthesis and Characterization of ZnO Nanopowder by Non-Basic Route. *Dig. J. Nanomater. Biostructures* 2011, 6, 1393–1401.
323. Fikai, M.; Nedelcu, I.-A.; Fikai, D.; Vasile, B.S.; Fikai, A.; Andronesu, E. The Influence of Ultrasonication on the Formation of COLL/HA Composite Materials. *Mater. Plast.* 2011, 48, 23–26.
324. Secu, M.; Cernea, M.; Secu, C.E.; Vasile, B.S. Structural Characterization and Photoluminescence of Nanocrystalline Ho-Doped BaTiO₃ Derived from Sol-Gel Method. *J. Nanoparticle Res.* 2011, 13, 3123–3128, doi:10.1007/s11051-011-0224-3.
325. Rogojan, R.; Andronesu, E.; Ghi\uulic\u0103, C.; \u0219tefan Vasile, B. Synthesis and Characterization of Alumina Nano-Powder Obtained by Sol-Gel Method. *UPB Sci. Bull. Ser. B Chem. Mater. Sci.* 2011, 73, 67–76.

326. Vlaicu, A.M.; Mercioniu, I.; Vasile, B.S.; Negrila, C.C.; Logofatu, C.; Cretu, N.C.; Nita, P.; Popescu-Pogriion, N. Structural and Chemical Properties of Cerium-Magnetoplumbite in Cerium Based IT-SOFC Compounds. *Optoelectron. Adv. Mater. Rapid Commun.* 2011, 5, 143–145.
327. Cernea, M.; Secu, M.; Secu, C.E.; Baibarac, M.; Vasile, B.S. Structural and Thermoluminescence Properties of Undoped and Fe-Doped-TiO₂ Nanopowders Processed by Sol-Gel Method. *J. Nanoparticle Res.* 2011, 13, 77–85, doi:10.1007/s11051-010-0002-7.
328. Ciobanu, C.S.; Andronescu, E.; Vasile, B.S.; Truşcă, R.; Predoi, D. Preliminary Studies on Hydroxyapatite Doped with Europium. *UPB Sci. Bull. Ser. B Chem. Mater. Sci.* 2011, 73, 63–70.
329. Fikai, M.; Andronescu, E.; Fikai, A.; Voicu, G.; Vasile, B.S. Poly Bis-GMA/HA Based Hybrid Composite Materials. *UPB Sci. Bull. Ser. B Chem. Mater. Sci.* 2011, 73, 75–84.
330. Chirea, M.; Freitas, A.; Vasile, B.S.; Ghitulica, C.; Pereira, C.M.; Silva, F. Gold Nanowire Networks: Synthesis, Characterization, and Catalytic Activity. *Langmuir* 2011, 27, 3906–3913, doi:10.1021/la104092b.
331. Fikai, D.; Fikai, A.; Vasile, B.S.; Fikai, M.; Oprea, O.; Guran, C.; Andronescu, E. Synthesis of Rod-like Magnetite by Using Low Magnetic Field. *Dig. J. Nanomater. Biostructures* 2011, 6, 943–951.
332. Rogojan, R.; Andronescu, E.; Iliescu, I.; Trusca, R.; Vasile, B.S. Synthesis and characterisation of calcia stabilised zirconia nano-powder, obtained by sol-gel method. *Rev. Rom. Mater.* 2011, 41, 240–247.
333. Stoleriu, S.; Andronescu, E.; Carabat, A.L.; Vasile, B.S. Influence of Preparation Conditions on Nanometric Characteristics of Zirconia and Alumina Powders. *Rev. Rom. Mater.* 2011, 41, 255–261.
334. Rogojan, r.; Andronescu, E.; Iliescu, I.; Trusca, R.; Vasile, B. Stefan sinteza si caracterizarea nano-pulberii de zircon{\u{a}} stabilizat{\u{a}} cu oxid de calciu, obtnuta prin metoda sol-gel synthesis and characterization of calcia stabilized zirconia nano-powder, obtained by sol-gel method. *Rev. Român{\u{a}} Mater. J. Mater.* 2011, 41, 240–247.
335. Stoleriu, Stefania; Andronescu, E.; Carabat, a.l.; Vasile, B. Stefan influenta condi{\c{t}}iilor de preparare asupra caracteristicilor nanometrice ale pulberilor de zircon{\u{a}} {\c{s}}i alumin{\u{a}} influence of preparation conditions on nanometric characteristics of zirconia and alumina powders. *Rev. Român Mater. J. Mater.* 2011, 41, 255–261.
336. Buscaglia, M.T.; Buscaglia, V.; Curecheriu, L.; Postolache, P.; Mitoseriu, L.; Ianculescu, A.C.; Vasile, B.S.; Zhe, Z.; Nanni, P. Fe₂O₃@BaTiO₃ Core-Shell Particles as Reactive Precursors for the Preparation of Multifunctional Composites Containing Different Magnetic Phases. *Chem. Mater.* 2010, 22, 4740–4748, doi:10.1021/cm1011982.

337. Ficai, A.; Andronesu, E.; Voicu, G.; Ghitulica, C.; Vasile, B.S.; Ficai, D.; Trandafir, V. Self-Assembled Collagen/Hydroxyapatite Composite Materials. *Chem. Eng. J.* 2010, 160, 794–800, doi:10.1016/j.cej.2010.03.088.
338. Ciobanu, C.S.; Andronesu, E.; Vasile, B.S.; Valsangiacom, C.M.; Ghita, R.V.; Predoi, D. Looking for New Synthesis of Hydroxyapatite Doped with Europium. *Optoelectron. Adv. Mater. Rapid Commun.* 2010, 4, 1515–1519.
339. Berger, D.; Trăistaru, G.A.; Vasile, B.S.; Jitaru, I.; Matei, C. Palladium Nanoparticles Synthesis with Controlled Morphology Obtained by Polyol Method. *UPB Sci. Bull. Ser. B Chem. Mater. Sci.* 2010, 72, 113–120.
340. Visinescu, D.; Paraschiv, C.; Ianculescu, A.; Jurca, B.; Vasile, B.; Carp, O. The Environmentally Benign Synthesis of Nanosized CoxZn1-XAl2O4 Blue Pigments. *Dye. Pigment.* 2010, 87, 125–131, doi:10.1016/j.dyepig.2010.03.006.
341. Denisa, F.; Ficai, A.; Voicu, G.; Vasile, B.S.; Guran, C.; Andronesu, E. Polysulfone Based Membranes with Desired Pores Characteristics. *Mater. Plast.* 2010, 47, 24–27.
342. Cernea, M.; Galassi, C.; Vasile, B.S.; Ganea, P.; Radu, R.; Ghita, G. Electrical Investigations of Holmium-Doped BaTiO₃ Derived from Sol-Gel Combustion. *J. Mater. Res.* 2010, 25, 1057–1063.
343. Buteicu, A.S.; Mihai, D.E.; Grumezescu, A.M.; Vasile, B.S.; Popescu, A.; Cui, D.; Mihai, O.M. The Cytotoxicity of (Non) Magnetic Nanoparticles Tested on Escherichia Coli and Staphylococcus Aureus. *Dig J Nanomater Biostruct* 2010, 5, 651–655.
344. Pavel, E.; Jinga, S.; Andronesu, E.; Vasile, B.S.; Rotiu, E.; Ionescu, L.; Mazilu, C. 5 Nm Structures Produced by Direct Laser Writing. *Nanotechnology* 2010, 22, 25301.
345. Buteicu, A.S.; Mihaiescu, D.E.; Grumezescu, A.M.; Vasile, B.; Popescu, A.; Mihaiescu, O.M.; Cristescu, R. The anti-bacterial activity of magnetic nanofluid: Fe₃O₄/oleic acid/cephalosporins core/shell/adsorption-shell proved on S. aureus and E. coli and possible applications as drug delivery systems. *Dig. J. Nanomater. & Biostructures* 2010, 5.
346. Ciobanu, C.S.; Andronesu, E.; Ficai, D.; Vasile, B.S.; Costescu, A.; Pasuk, I.; Predoi, D. Preliminary Research on Synthesis and Characterization of Europium Doped Nano-Crystalline Apatite. 2010.
347. Ciobanu, C.; Andronesu, E.; Ficai, D.; Vasile, B.; Costescu, A.; Pasuk, I.; Predoi, D. CPPP 30 P Preliminary Research on Synthesis and Characterization of Europium Doped Nano-Crystalline Apatite. In *Proceedings of the 5th INTERNATIONAL CONFERENCE ON MATERIALS SCIENCE AND CONDENSED MATTER PHYSICS*; 2010; p. 156.
348. Nicola, O.; Ghitulica, C.; Andronesu, E.; Visan, C.; Vasile, B.S. Composite Ceramics Reinforced with Zirconia Nanopowders. *Adv. Mater. Res.* 2008, 47-50 PART, 1059–1062, doi:10.4028/www.scientific.net/amr.47-50.1059.

349. Pascu, L.F.; Negrea, S.; Motoc, S.; Manea, F.; Pop, A.; Surdu, V.-A.; Vasile, B.S.; Pandele, A.M.; Ianculescu, A.-C.; others Nico2o4 Nanoparticles for Enhancing Voltammetric Detection of Sodium Diclofenac in Aqueous Solutions. Raluca, Nico2o4 Nanoparticles Enhancing Voltammetric Detect. Sodium Diclofenac Aqueous Solut.
350. SPOIALA, A.; ILIE, C.-I.; FICAI, D.; FICAI, A.; MOISE, L.; Trusca, V.; TRUSCA, R.D.; VASILE, B.S.; OPREA, O.; GAFENCU, A.; et al. Alginate Beads Loaded with Cells and Biologic Active Agents. IIB 2, 2.
351. Grumezescu, A.M.; Andronescu, E.; Fikai, A.; Yang, C.-H.; Huang, K.-S.; Vasile, B.S.; Voicu, G.; Mihaiescu, D.E.; Bleotu, C. Letters in Applied NanoBioScience.
352. Birca, A.C.; Grumezescu, A.M.; Iordache, F.; Holban, A.M.; Stoica, A.O.; Neacșu, I.A.; Vasile, B.S.; Surdu, V.A.; Trușca, R. Composite Hydrogels with Application in Wound Healing.
353. Ene, V.L.; Șerban, A.B.; Leca, V.; Vasile, B.S.; Andronescu, E. Proceedings International.
354. Neacsu, I.A.; Croitorescu, I.C.; Ene, V.L.; Trusca, R.; Vasile, B.S.; Holban, A.M.; Birca, A.C.; Andronescu, E. Bioactive Antimicrobial SiO₂-Ag Modified Wound-Dressings.
355. Ene, V.L.; NEACSU, I.A.; VASILE, B.S.; BIRCA, A.C.; ANDRONESCU, E.; FICAI, A. Nanostructured Magnetic Materials Used in Cancer Treatment.
356. COLIE, M.; MIHAIESCU, D.A.N.E.; ISTRATI, D.; SURDU, A.V.; VASILE, B.; STANICA, N.; FUDULU, A.; ANDRONESCU, E. Synthesis and Characterization of a Core-Shell Material Using YBa.
357. BERGER, D.; CONSTANTIN, D.; VASILE, B. Stefan; Elena, C.; MIRON, A.N.; MATEI, C. NOBLE METAL NANOPARTICLES WITH CONTROLLED MORPHOLOGY.
358. Vasile, O.-R.; van Staden, R.-I.; van Staden, J.F.; Balasoiu, S.-C.; Vasile, B. Stefan NEW NANOSTRUCTURED MATERIALS BASED ELECTROCHEMICAL MICROSENSORS.

c) Proceedings:

1. ***High temperature superconducting materials based on Graphene / YBCO nanocomposite***, Colie, M., Mihaiescu, D., Surdu, A., Trusca, R., **Vasile, B.**, Istrati, D., Fikai, A., Plapcianu, C., Andronescu, E., Materials Today: Proceedings, 2016, Volume 3, Issue 8, Pages 2628-2634, 10.1016/j.matpr.2016.06.006, WOS:000398483700007.
2. ***Antibiotic Incidence, Distribution and Resistance in Wastewaters***, Anton Fikai, Denisa Fikai, **Bogdan Stefan Vasile**, Dan Eduard Mihaiescu, Bogdan Purcarea, Marcela Popa, Carmen Mariana Chifiriuc, Multidisciplinary Digital Publishing Institute Proceedings, 2019, Volume 29, Issue 1, Pages 119.
3. ***TEM Characterization of stabilised zirconia nanopowders***, **Bogdan S. Vasile**, Cristina Ghitulica, Ecaterina Andronescu, Otilia R. Vasile, I. International Ceramic, Glass, Porcelain, Enamel, Glaze and Pigment Congress, 12-14 October 2009, Eskisehir, Turkey, ISBN 978-975-94814-7-6.
4. ***Pd nanoparticles synthesis with controlled morphology obtained by polyol method***, Daniela Berger, Gina Alina Trăistaru, **Bogdan Vasile**, Ioana Jitaru, Cristian Matei, 16th Romanian International Conference on Chemistry and Chemical Engineering, September 9 – 12, 2009, Sinaia – Romania;
5. ***Structural investigation on yttria doped zirconia nanocrystalites obtained through pirosol method***, **B.S. Vasile**, Ecaterina Andronescu, Cristina Ghitulica, Raluca Dobranis, Georgeta Pall, Roxana Trusca, 16th Romanian International Conference on Chemistry and Chemical Engineering September 9 – 12, 2009, Sinaia – Romania;
6. ***Dental ceramics for opaque restorations***, **B. S. Vasile**, Ecaterina Andronescu, Cristina Ghitulica, Oana Nicola, The 15th Romanian International Conference on Chemistry and Chemical Engineering, September 19 – 22, 2007.

d) Conferences

Oral presentation:

1. ***Synthesis and characterization of mesoporous magnetic nanoparticles***, Denisa FICAI, Ecaterina ANDRONESCU, Anton FICAI, **Bogdan VASILE**, Cezar COMANESCU, Cornelia GURAN, 17th Romanian International Conference on Chemistry and Chemical Engineering September 7 – 10, 2011, Sinaia – Romania;
2. ***Influence of obtaining conditions on nanometric characteristics of zirconia and alumina powders***, Stefania STOLERIU, Alexandra CARABAT, **Bogdan VASILE**, Ecaterina ANDRONESCU, 17th Romanian International Conference on Chemistry and Chemical Engineering September 7 – 10, 2011, Sinaia – Romania;
3. ***A new route for synthesis of macroporous granular silver***, Adrian STROIA, Cristian MATEI, **Bogdan S. VASILE**, Ovidiu OPREA, Cristina COVALIU, Ioana JITARU, 17th Romanian International Conference on Chemistry and Chemical Engineering September 7 – 10, 2011, Sinaia – Romania;
4. ***Noble metal nanoparticles with controlled morphology***, Daniela BERGER, Doru CONSTANTIN, **Bogdan Stefan VASILE**, Carmen Elena MIRON, Adrian Nicoara, Cristian Matei, 17th Romanian International Conference on Chemistry and Chemical Engineering September 7 – 10, 2011, Sinaia – Romania;

5. *A comparative study on nanostructured zirconia ceramics and nanocomposites sintered by different methods*, **B. S. Vasile**, E. Andronescu, C. Ghitulica, O. R. Vasile, L. Curechiu, R. Scurtu, 12th Conference of the European Ceramic Society, Stockholm, Sweden, June 19-23, 2011;
6. *Cubic Stabilized Zirconia Nanoparticles Obtained through the Pirosol Method*, **B.S. Vasile** (presenting author), C. Ghitulica, E. Andronescu, E. Dinu, O.R. Vasile –, ICC3 – 3rd International Congress on Ceramics, Nov. 14-18, 2010, Osaka, Japan;
7. *Structural Investigations on Yttria – Doped Zirconia Nanopowders Obtained by Different Methods*, Nicoletta Popescu-Pogriion, Ionel Mercioniu, **Bogdan Vasile**, Andrei Popescu, Cristina Ghitulica, Serban Constantinescu, Iancu Mihailescu, Ecaterina Andronescu, 18th National Electron Microscopy Congress, Eskisehir, Turkey, 26-29 August 2007.
8. *Structural investigations on yttria - doped zirconia nanopowders obtained by sol-gel method*, **B. S. Vasile**, Student Speech Contest, 10th International Conference and Exhibition of the European Ceramic Society, June 17 - 21, 2007, Berlin.

Poster presentation

9. *Microstructure characteristics of EB-PVD perovskite thermal barrier coatings*, Adrian SURDU, Bogdan VASILE, Alexandra BÎRCĂ, Otilia VASILE, Ecaterina ANDRONESCU, Roxana TRUȘCĂ, Radu PITICESCU, Arcadii SOBETKII, 7th International Congress on Ceramics June 17 - 21, 2018, Foz do Iguaçu, Brazil;
10. *TEM characterization of stabilised zirconia nanopowders*, Bogdan S. VASILE*, Cristina GHITULICA*, Ecaterina ANDRONESCU and Otilia R. VASILE, International ceramic, glass, porcelain enamel, glaze and pigment congress, 12-14 October 2009, Eskisehir, Turkey;
11. *Yttria totally stabilized zirconia nanoparticles obtained through the pyrosol method*, B.S. Vasile, Otilia-Ruxandra Vasile, Cristina Ghitulica, Ecaterina Andronescu, Raluca Dobranis, Elena Dinu, Roxana Trusca, Trends in Nanotechnology, 2009, Barcelona Spain;
12. *New nanostructured materials based electrochemical microsensors*, Otilia-Ruxandra Vasile, Raluca-Ioana van Staden, Jacobus Frederick van Staden, Simona-Cornelia Bălăsoiu, Bogdan Ștefan Vasile, Trends in Nanotechnology, 2009, Barcelona Spain;
13. *Micro to nanosilver cytotoxicity: influence of grain size and synthesis route*, O. R. Vasile, E. Andronescu, B. S. Vasile, R. Trusca, E. Vasile, C. Bleotu, A. M. Holban, C. M. Chifiriuc, F. Iordache, ECASIA European Association on Applications of Surface and Interface Analysis, Montpellier, France, 2017

e) National conferences:

1. *Wound-Dressings with Antimicrobial Activity*, Ionela Andreea Neacsu, Alina Maria Holban, Bogdan-Stefan Vasile, Vladimir Lucian Ene, Coralia Bleotu, Madalina Georgiana Albu Kaya, Anton Ficai, Ecaterina Andronescu, A XIII-a Conferință de Știința și Ingineria Materialelor Oxidice – CONSILOX ALBA IULIA, ROMÂNIA 1-3 OCTOMBRIE 2021
2. *Terbium-Doped Hydroxyapatite*. Andrei Păduraru. Ovidiu Oprea. Adina Magdalena Musuc. Bogdan Ștefan Vasile. Florin Iordache. Ecaterina Andronescu, APPLICATIONS OF

- CHEMISTRY IN NANOSCIENCES AND BIOMATERIALS ENGINEERING, 25 - 26 June 2021;
3. ***Fly Ash Evaluation as Potential EOL Material Replacement in Cement Pastes.*** Adrian-Ionuț Nicoara. Bogdan Ștefan Vasile. Vasile-Adrian Surdu. Vladimir Lucian Ene. Ionela Andreea Neacsu. Alexandra Elena Stoica. Ovidiu Oprea. Iulian Boierasu. Roxana Trusca. Mirijam Vrabec. Nastja Šmuc Rogan. Saso Sturm. Clea Ow-Yang. Mehmet Ali Gulgun. Zeynep Basaran Bundur, *APPLICATIONS OF CHEMISTRY IN NANOSCIENCES AND BIOMATERIALS ENGINEERING*, 25 - 26 June 2021;
 4. ***In Situ Evaluation of Fly Ash as Potential EOL Material Replacement in Cement Pastes.*** Bogdan Ștefan Vasile. Adrian-Ionuț Nicoara. Vasile-Adrian Surdu. Vladimir Lucian Ene. Ionela Andreea Neacsu. Alexandra Elena Stoica. Ovidiu Oprea. Iulian Boierasu. Roxana Trusca. Mirijam Vrabec. Nastja Šmuc Rogan. Saso Sturm. Clea Ow-Yang. Mehmet Ali Gulgun. Zeynep Basaran Bundur, *APPLICATIONS OF CHEMISTRY IN NANOSCIENCES AND BIOMATERIALS ENGINEERING*, 25 - 26 June 2021;
 5. ***Influence of the Ti precursor on the self-assembly phenomena in hierarchical SrTiO₃ structures prepared by hydrothermal method,*** Vishwanath Kalyani, Adelina-Carmen Ianculescu, Bogdan Vasile, Andrea Testino, Agnese Carino, Maria Teresa Buscaglia, Vincenzo Buscaglia, Paolo Nanni, 2 nd “Conference of the Romanian Electron Microscopy Society - C.R.E.M.S.” 16th – 18th of may, 2017;
 6. ***Radiation Induced Effects in Nanocrystalline Thin Films,*** B. S. Vasile, D. Craciun, O. Fufa, P. Ionescu, V. Craciun, 2 nd “Conference of the Romanian Electron Microscopy Society - C.R.E.M.S.” 16th – 18th of may, 2017
 7. ***Doxorubicin- functionalized magnetite nanoparticles with anti-tumor applications: focus on electron microscopy investigations,*** R.C. Popescu, R. Trușcă, B. Vasile, M. Straticiuc, A. Apostol, G. Voicu, E. Andronescu, D. Savu, A.M. Grumezescu, 2 nd “Conference of the Romanian Electron Microscopy Society - C.R.E.M.S.” 16th – 18th of may, 2017;
 8. ***Nanostructured biomaterials for tissue engineering and reconstruction,*** Alexandra Elena Oprea, Anton Fica, Bogdan Ștefan Vasile, Alexandru Mihai Grumezescu, Ecaterina Andronescu, Bîrcă Alexandra Cătălina, Laurențiu Mogoanta, George Dan Mogosanu, 2 nd “Conference of the Romanian Electron Microscopy Society - C.R.E.M.S.” 16th – 18th of may, 2017;
 9. ***HAp-Ag bionanostructured coatings for titanium implants,*** O. Fufă, B.Ș. Vasile, R. Trușcă, M. Socol, L. Mogoantă, R.C. Popescu, G. Popescu-Pelin, G. Socol, A.M. Grumezescu, E. Andronescu, 2 nd “Conference of the Romanian Electron Microscopy Society - C.R.E.M.S.” 16th – 18th of may, 2017;
 10. ***Electron microscopy investigations on ferroelectric domains in multiferroic (Pb_{1-3x/2}Ndx)(Ti_{0.98-y}FeyMn_{0.02})O₃ ceramics,*** B.S. Vasile, M. Cernea, R. Trusca, 2 nd “Conference of the Romanian Electron Microscopy Society - C.R.E.M.S.” 16th – 18th of may, 2017;
 11. ***Macroscopic 3D graphene Films. Wet acquisition and evaluation Surface Architecture,*** Roxana Trusca, Bogdan Vasile, Vasile-Adrian Surdu, Cornel Fratila, Georgiana Moise, 2 nd “Conference of the Romanian Electron Microscopy Society - C.R.E.M.S.” 16th – 18th of may, 2017;
 12. ***Morpho-structural effects induced by advanced cryogenic gradients, oxidation and thermal shock on EB-PVD thermal barrier coatings,*** Ecaterina Andronescu, Vasile-Adrian Surdu, Roxana Trușcă, Alexandra Bîrcă, Arcadie Sobetkii, Bogdan Vasile, Mircea Corban,

Mihail Boțan, Radu Piticescu, 3rd Conference of the Romanian Electron Microscopy Society, October 23-25, 2019

13. **Nanostructured coatings based on silver nanoparticles with applications in anti-infectious therapy**, A.C. Bîrcă, A.M. Grumezescu, F. Iordache, A.M. Holban, A.O. Stoica, I.A. Neacșu, B.S. Vasile, V.A. Surdu, R. Trușcă
14. **Composite hydrogels with application in wound healing**, A.C. Bîrcă, A.M. Grumezescu, F. Iordache, A.M. Holban, A.O. Stoica, I.A. Neacșu, B.S. Vasile, V.A. Surdu, R. Trușcă
15. **Microscopy studies on magnetron sputtered thin films with preferred orientation for positron moderation**, V.L. Ene, A.B. Șerban, V. Leca, B.S. Vasile, E. Andronescu
16. **Surface salinization of wood based materials for improved fire resistance**, Cristina Popescu, Ovidiu Oprea, Anton Fikai, Denisa Fikai, Bogdan Stefan Vasile, Roxana Doina Trusca, Ecaterina Andronescu
17. **MCM-41/Fe₃O₄ /paracetamol mesoporous materials as drug delivery system**, Simona Popescu, Denisa Fikai, Roxana Doina Trusca, Bogdan Stefan Vasile, Ovidiu Cristian Oprea, Anton Fikai, Ecaterina Andronescu
18. **Bioactive antimicrobial SiO₂-Ag modified wound-dressings**, I.A. Neacsu, I. C. Croitorescu, V.L. Ene, R. Trusca, B.S. Vasile, A.M. Holban, A.C. Birca, E. Andronescu
19. **Influence of supplementary cementitious materials on hydration and microstructure development of concrete**, A.I. Nicoara, R. Trusca, O. Oprea, B.S. Vasile
20. **Bacterial cellulose- hydroxyapatite- silver based composites with applications in the field of hard tissue engineering**, A. Paduraru, D. Ene, A.I. Nicoara, B.S. Vasile, R. Trusca, A.M. Holban
21. **Fabrication of silica fibers by electrospinning technique and its application in bone tissue engineering**, Alexandra Elena Stoica, Alexandru Mihai Grumezescu, Anca Oana Hermenean, Bogdan Stefan Vasile, Roxana Trusca, Ovidiu Oprea, Ecaterina Andronescu
22. **AgNPs-PET nanofibers with antimicrobial properties**, A.E. Stoica, A.M. Grumezescu, C. Chircov, A.M. Holban, A. Fikai, B.S. Vasile, E. Andronescu
23. **Microscopic investigations of advanced coating architectures for aeronautics**, Anca Slobozeanu, Victor Manoliu, Mihai Botan, Bogdan Vasile, Mircea Corban, Radu R. Piticescu, Sorina Nicoleta Valsan
24. **Eu³ + doped hydroxyapatite as a fluorescent material for biomedical applications**, O.R. Vasile, E. Andronescu, D. Predoi, I.A. Neacsu, A.V. Paduraru, A.M. Musuc, R. Trusca, O. Oprea, E. Tanasa, A.I. Nicoara, A.V. Surdu, F. Iordache, A.C. Birca, B.S. Vasile
25. **Silver nanoparticles coated with EG/PEG for anti-infective therapy**, C. Chircov, A. Burdusel, A.E. Oprea, A.C. Birca, A.M. Grumezescu, O. Oprea, B.S. Vasile, L. Mogoanta

i) Patents:

1. **Fikai D, Andronescu E, Sonmez M, Fikai A, Oprea O, Vasile B.S.**, “Multifunction systems of the magnetite/thio acids/ag or au type, to be employed in cancer diagnosis and guided treatment”. Univ Politehnica Din Bucuresti; RO129824-A2.
2. **Ianculescu A.C., Stanciu C.A., Vasile B.S., Trușcă R., Nicoară A.I., Eftimie A.M., Surdu V.A.**, “Preparation process by the negative template method combined with sol-gel chemistry of cerium doped BaTiO₃ one-dimensional nanostructures with ferroelectric and piezoelectric characteristics”, Derwent Primary Accession Number: 2020-01884J, Patent No RO133773-A0

g) Certificates:



Certificate

This is to certify that
Bogdan Stefan Vasile

has participated in the

Tecnai Basic Course

at the FEI Application Laboratory in
Eindhoven, the Netherlands

November 10 – 14, 2008

Course Leader

Matthijn Vos
Matthijn Vos

FEI Academy Manager

Eric Bathelt
Eric Bathelt

 **FEI COMPANY™**

NanoConsulting
Dieter Vollath

TU Graz
Graz University of Technology

Certificate

From May 25 to May 28, 2009

Bogdan Stefan Vasile

attended the course

Nanomaterials

and participated the group work successfully.

Bad Gastein, May 28, 2009

Dieter Vollath
Prof. Dr. Dieter Vollath

www.nanoconsulting.de

RONEXPRIM
WE DELIVER PERFORMANCE

Exportreport, Engineering,
Services, Consulting, Software



RONEXPRIM
WE DELIVER PERFORMANCE

 **FEI™**

Certificate

We, Ronexprim SRL, hereby confirm that **dr.eng. Bogdan Stefan VASILE** has attended the

**"Titan Themis 200 on-site Life Science Training Course -
Vitrobot and Cryo-TEM"**

held at University POLITEHNICA Bucharest, March 08 - 10, 2016.

The course's Instructor: dr. Maarten Wrix - Research Scientist TEM, FEI Company.

Covered topics:

CryoTEM sample preparation and basic imaging

- Preparation of cryogen
- Vitrobot and vitrification
- Cryo-TEM imaging

STEM/EDS imaging and alignment

- Optimizing & Aligning TEM and electron diffraction for cryo work
- Contrast mechanisms in cryo-TEM and dark field imaging
- Low dose imaging

Tomography

- Tomography Data Acquisition
- Reconstruction using Inspect3D

RONEXPRIM

dr. eng. Rodica STOIAN
General Manager

FEI COMPANY

NanoPort Europe

dr. Maarten Wrix
Research Scientist TEM

RONEXPRIM
WE DELIVER PERFORMANCE

Exportreport, Engineering,
Services, Consulting, Software



RONEXPRIM
WE DELIVER PERFORMANCE

 **FEI™**

Certificate

We, Ronexprim SRL, hereby confirm that **dr.eng. Bogdan Stefan VASILE** has attended the

"On-site Training Course - Titan Themis 200 for Materials Science"

held at University POLITEHNICA Bucharest, February 16 - 18, 2016.

The course's Instructor: dr. Sorin LAZAR - Senior Research Scientist FEI Company.

Covered topics:

- o HR TEM
- o Image Corrector Tuning
- o HR STEM
- o Optic Condenser System
- o EDX Esprit
- o CETA Image Acquisition
- o EELS
- o Velox
- o Lorentz Imaging
- o STEM, EDX and EELS Mapping

RONEXPRIM

dr. eng. Rodica STOIAN
General Manager

FEI COMPANY
NanoPort Europe

dr. Sorin LAZAR
Senior Research Scientist

Certificate

We, Ronexprim SRL, hereby confirm that **dr.eng. Bogdan Stefan VASILE** has attended the

**"On-site Training Course - SEM, FIB and EDS
for Versa 3D"**

held in University POLITEHNICA Bucharest, February 08 - 12, 2016.

The course's Instructor: **dr. Ellen BAKEN** - Senior Application Specialist FEI Company.

The course has covered the underlying principles and practical aspects of SEM Versa 3D. Loading and unloading samples, the formation of the SEM image, detector use, stage navigation, aligning the beam and milling a cross-section has been covered in the lectures and practical exercises.

Covered topics:

- The instrument
 - o Introduction to the GUI
 - o Stage navigation
- Electron beam
 - o Types of interaction and resulting signals
- Ion beam
 - o General operation
- Technical and sample related topics
 - o Milling a cross-section
 - o Alignment
 - o TEM sample preparation
- EDS module
 - o Interaction and resulting signals

RONEXPRIM

dr.eng. **Rodica STOIAN**
General Manager

FEI COMPANY

NanoPort Europe

dr. **Ellen BAKEN**
Senior Application Specialist

X-Ray Diffraction Certificate

This is to certify that

Bogdan Stefan VASILE

has successfully completed the

XRD Course 24th – 28th June 2013

Held at UNIVERSITATEA POLITEHNICA DIN BUCURESTI



Signature of course tutor: Marco Sommariva

Marco Sommariva

Date: 28th June 2013